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DISEASE OUTBREAKS FROM WATER, MILK, AND OTHER FOODS IN 1939 [1]

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Since 1923 the United States Public Health Service has collected reports annually from State and local health departments on milk-borne outbreaks of disease. Summaries of these outbreaks have been compiled and issued in mimeographed form each year. Prior to that time our knowledge of milk-borne disease outbreaks was limited to those which had found their way into the literature. As a result of these annual surveys the number of milk-borne outbreaks coming to our attention has increased from an average of 17 per year prior to 1923 to an average of 42 per year since that date.

In the interest of more complete knowledge of disease outbreaks conveyed through vehicles other than milk and milk products, 2 years ago the Public Health Service inaugurated the first Nation-wide survey of outbreaks of disease caused by faulty sanitation in general. Mimeographed reports have been issued for 1938 and for 1939, containing summaries of each outbreak reported from water supplies, milk and milk products, other foods, and unidentified vehicles. A discussion of the outbreaks occurring during 1938 has been published.[2] The present discussion gives a summary and analysis of the outbreaks reported for 1939.

Table 1 lists the total outbreaks, cases, and deaths, according to vehicle, for 1939; data for 1938 are given for purposes of comparison.

The most striking fact is that other foods were a far more prolific source of outbreaks than were milk or water. This is particularly true for 1939, when other foods were responsible for nearly 60 percent of all outbreaks reported, as compared to approximately 40 percent for 1938. The increase for 1939 may represent better reporting rather than an actual rise. In 1939, outbreaks from other foods likewise involved more cases and more deaths than did those due to water or

[1] From the States Relations Division. Read before the Central Atlantic States Association of Dairy, Food, and Drug Officials, Atlantic City, May 16, 1941.

[2] Frank, Leslie C.: Disease outbreaks resulting from faulty environmental sanitation. Pub. Health Rep., 55: 1373 (Aug. 2, 1940) (Reprint No. 2185).

milk. The excess of total cases in 1938 over 1939 was the result of a single water-borne outbreak of gastroenteritis, involving 29,250 cases, which occurred in one large city.

TABLE 1.—*Total outbreaks, cases, and deaths, by vehicles, 1939 and 1938*

Vehicle	1939			1938		
	Outbreaks	Cases	Deaths	Outbreaks	Cases	Deaths
Water supplies	43	2,254	3	48	31,693	17
Milk and milk products	41	2,509	7	42	1,685	27
Other foods	148	3,782	12	70	2,247	25
Unidentified vehicles	17	1,203	6	8	882	3
Total	249	9,748	28	168	36,507	72

The largest outbreak reported for 1939 was one of bacillary dysentery occurring in a State institution in the town of Marcy, N. Y., in which 609 of the 2,321 patients exposed were affected through either milk or food prepared by three carriers. This outbreak is listed under unidentified vehicles. The largest outbreak from milk and milk products was one of septic sore throat at Catskill and Saugerties, N. Y., involving 546 customers of a raw-milk dealer handling 10 percent of the total suply. The infection was traced to a cow with acute mastitis from which hemolytic streptococci of the human type were isolated. The largest outbreak from water supplies occurred at Minneapolis. Approximately 400 cases of gastroenteritis and 2 cases of typhoid fever were reported among employees of office buildings using water from drilled basement wells which were found to be contaminated by sewage. The largest outbreak from other foods was one of gastroenteritis in Monroe County, N. Y., in which 320 of the 400 guests at a university banquet were affected. Neither the identity of the food nor the manner of contamination could be ascertained.

WATER-BORNE OUTBREAKS

Table 2 shows that unsafe water supplies caused far more outbreaks and cases of gastroenteritis than of either typhoid fever or dysentery. Incidentally, in 1939 there were more outbreaks of typhoid fever from water supplies than from milk and other foods combined, but this was not the case in 1938.

From table 3 it is seen that ground water supplies were incriminated in 31 of the 35 water-borne outbreaks for which the type of water supply was reported. In nearly all cases the wells and springs were contaminated by sewage or surface drainage. One of the important problems still remaining in connection with the prevention of water-borne disease is the sanitary control of ground water supplies.

TABLE 2.—*Outbreaks, cases, and deaths, 1939, by diseases and by vehicles*

Disease	Water supplies			Milk and milk products			Other foods			Unidentified vehicles			All vehicles		
	Outbreaks	Cases	Deaths	Outbreaks	Cases	Deaths	Outbreaks	Cases	Deaths	Outbreaks	Cases	Deaths	Outbreaks	Cases	Deaths
Botulism							9	16	7				9	16	7
Dysentery	3	265	0	2	324	0	2	99	0	5	916	4	12	1,604	4
Food poisoning				12	179	0	88	1,347	2				100	1,526	2
Gastroenteritis (including diarrhea)	27	1,892	0	7	570	0	35	1,880	0	5	246	0	74	4,588	0
Paratyphoid fever				2	24	0	2	247	1				4	271	1
Scarlet fever				3	42	1	1	27	0				4	69	1
Septic sore throat				6	1,282	5							6	1,282	5
Trichinosis							4	30	0				4	30	0
Typhoid fever	13	97	3	6	51	1	5	99	1	7	41	2	31	288	7
Undulant fever				1	4	0							1	4	0
Not stated				2	33	0	2	37	1				4	70	1
Total	43	2,254	3	41	2,509	7	148	3,782	12	17	1,203	6	249	9,748	28

TABLE 3.—*Water-borne outbreaks, 1939, by type of supply*

Type of water supply	Number of outbreaks	Number of cases	Number of deaths
Ground water supplies:			
Treated	2	80	0
Untreated	24	1,303	2
Treatment not stated	5	90	1
Surface water supplies:			
Treated	0	0	0
Untreated	3	38	0
Treatment not stated	1	10	0
Source not stated:			
Treated	4	337	0
Untreated	0	0	0
Treatment not stated [1]	4	396	0
Total	43	2,254	3

[1] 1 outbreak included in this group, involving 325 cases of gastroenteritis, was attributed to ice.

Table 4 shows water-borne outbreaks by size of community. It will be noted that 8 outbreaks occurred in cities of more than 10,000 population, as compared with 30 in communities under 10,000. While the number of communities under 10,000 population is many times greater than the number over 10,000, their total populations are approximately equal. It is obvious, therefore, that smaller communities had fewer water-borne outbreaks in proportion to their number than the larger cities. On the other hand, the number of persons affected was greater in proportion to population.

Table 5 shows the States in which the water-borne outbreaks occurred. Two-thirds of the States failed to report any water-borne outbreaks for 1939, whereas nearly one-half of all the outbreaks were reported by a single State. Comment on this interesting fact will be made later.

TABLE 4.—*Outbreaks and cases, 1939, by size of community and by vehicles*

Population of community	Water supplies		Milk and milk products		Other foods	
	Outbreaks	Cases	Outbreaks	Cases	Outbreaks	Cases
1–99	1	2	1	5	1	4
100–499	5	151	1	9	4	185
500–999	2	63	1	70	4	146
1,000–2,499	7	522	4	125	9	506
2,500–4,999	7	246	8	724	6	441
5,000–9,999	8	307	5	392	9	351
Under 10,000	30	1,291	20	1,325	33	1,633
10,000–24,999	3	181	8	895	14	392
25,000–99,999	1	3	6	226	19	130
100,000–499,999	3	727	2	38	27	199
500,000 and over	1	15	4	17	45	803
Over 10,000	8	926	20	1,176	105	1,524
Population not stated	5	37	1	8	10	625
Total	43	2,254	41	2,509	148	3,782

The month of onset of outbreaks is shown in table 6. Water-borne outbreaks were characteristically of summer occurrence, 34 of the 43 reported having started during the 6 months from April through September. Nearly half of the outbreaks began in the single month of July. The same seasonal distribution was common to the three diseases reported.

TABLE 5.—*Outbreaks and cases, 1939, by location and by vehicles*

State	Water supplies		Milk and milk products		Other foods	
	Outbreaks	Cases	Outbreaks	Cases	Outbreaks	Cases
Alabama			1	27	1	26
California	1	2	11	71	62	888
District of Columbia					1	28
Georgia			1	89		
Illinois					1	126
Indiana	3	46	1	199	4	111
Iowa					1	26
Kansas			1	22	10	28
Kentucky	1	14			12	89
Maryland	1	6			6	173
Massachusetts	3	140	1	10	5	421
Michigan					1	4
Minnesota	2	402	2	285		
Missouri	1	10			2	13
New Hampshire			1	70		
New Jersey	1	325			4	21
New Mexico	1	2			2	8
New York	21	935	6	753	28	1,453
North Carolina			2	9		
North Dakota			1	5		
Ohio	1	3	1	21	4	128
Oklahoma			3	303		
Pennsylvania			1	9	2	107
Tennessee			1	4		
Texas	1	150	1	11		
Vermont			1	18		
Virginia	3	111	5	603	1	130
Washington	1	92				
West Virginia	1	8			1	2
Wyoming	1	8				
Total	43	2,254	41	2,509	148	3,782

TABLE 6.—*Outbreaks reported during 1939, by date of onset, disease, and vehicle*

Disease	Water supplies				Milk and milk products				Other foods			
	Jan. to Mar.	Apr. to June	July to Sept.	Oct. to Dec.	Jan. to Mar.	Apr. to June	July to Sept.	Oct. to Dec.	Jan. to Mar.	Apr. to June	July to Sept.	Oct. to Dec.
Botulism									5			4
Dysentery		1	1	1			1	1		2		
Food poisoning [1]					2	3	3	4	10	22	38	17
Gastroenteritis (incl. diarrhea)	3	1	21	2		4	2	1	6	10	17	2
Paratyphoid fever						1	1					2
Scarlet fever					1		1	1	1			
Septic sore throat [2]						2	2	1				
Trichinosis									2			2
Typhoid fever [2]	1	4	6	2	1	1	2	1	2		1	2
Undulant fever							1					
Not stated					1			1	1	1		
Total	4	6	28	5	5	11	13	10	27	35	56	29

[1] Date of onset of 1 food-borne outbreak not reported.
[2] Date of onset of 1 milk-borne outbreak not reported.

OUTBREAKS TRANSMITTED THROUGH MILK AND MILK PRODUCTS

Of the eight diseases listed in table 2 as milk-borne, food poisoning caused the most outbreaks, but septic sore throat contributed by far the most cases and deaths.

TABLE 7.—*Outbreaks transmitted through milk and milk products, 1939, by kind of supply*

Kind of supply	Number of outbreaks	Number of cases	Number of deaths
Sweet milk, raw	20	1,545	6
Sweet milk, pasteurized	4	477	0
Sweet milk, undesignated	2	19	0
Sweet milk, sweet cream, and ice cream, raw	1	274	0
Sweet milk and butter, raw	1	9	1
Sweet milk or ice cream, pasteurized	1	8	0
Buttermilk, raw	1	7	0
Buttermilk, sweet cream and sweet milk, raw	1	89	0
Ice cream, raw	1	12	0
Ice cream, undesignated	5	45	0
Cheese, undesignated	2	14	0
Canned milk	1	4	0
Cream, raw	1	6	0
Total	41	2,509	7

Table 7 shows the type of milk and milk products involved. Sweet milk, either alone or in combination, was the vehicle in 30 outbreaks, ice cream in 8, sweet cream in 3, buttermilk in 2, cheese in 2, and butter and canned milk in 1 each. The percentage of outbreaks involving ice cream, either alone or in combination, in 1939 was twice that reported for the preceding 5 years. Of the 5 outbreaks attributed to pasteurized milk, 1 of food poisoning was traced to dirty milk bottles, 1 of gastroenteritis to a plant employee who filled 10-gallon cans, 1 of paratyphoid fever to flooding of bottled milk, while in 2 the manner of contamination was not determined. The great majority of outbreaks was, as usual, from raw milk and its products. For the 16-year period 1923–1938 the Public Health Service compilation of milk-borne disease outbreaks indicates that about 95 percent of the outbreaks and of the cases involved were caused by raw milk and milk products. Since only about 30 percent of the milk used during this period was raw, the risk of contracting disease from raw milk was about 50 times as great as from milk labeled "pasteurized."

From table 4 it is seen that both milk-borne outbreaks and cases were about equally distributed among communities over and under 10,000 population. In previous years most milk-borne outbreaks have occurred in the smaller communities, where the percentage of milk pasteurized is low and where the least control over milk supplies is exercised. In 1939 one-half of the outbreaks and over three-fourths of the cases occurred in cities of 2,500 to 25,000 population.

Table 5 shows that 30 States failed to report any milk-borne outbreaks, whereas 22 outbreaks, or over half of the total, were reported from 3 States.

The seasonal distribution of milk-borne outbreaks, shown in table 6, is unlike that of water-borne outbreaks. Those from milk are not predominantly warm weather diseases but occur throughout the year.

FOOD-BORNE OUTBREAKS

It is evident from table 2 that, while 8 different diseases were involved in food-borne outbreaks in 1939, the overwhelming majority of outbreaks and cases involved food poisoning and gastroenteritis.

The kind of food responsible for outbreaks is shown in table 8. As in 1938, outbreaks traced to pies and pastry were the most numerous and those due to pork and pork products held second place. By far the largest number of cases, however, occurred in the outbreaks for which the kind of food was not reported.

TABLE 8.—*Food-borne outbreaks, 1939, by kind of food*

Kind of food	Number of outbreaks	Number of cases	Number of deaths
Crab meat	5	365	0
Fowl	7	97	0
Home-canned vegetables, fruits, fish, and meat	10	23	7
Meat and meat products	11	252	0
Miscellaneous	25	583	0
Pies and pastry	32	484	1
Pork and pork products	21	163	2
Salads	8	241	0
Sandwiches	7	181	0
Sauces and gravy	5	94	0
Kind of food not reported	17	1,299	2
Total	148	3,782	12

Table 4, which lists disease outbreaks by size of community, brings out one of the characteristic differences between food-borne outbreaks and those transmitted through water and milk. Over 70 percent of the food-borne outbreaks occurred in cities of over 10,000 population. Apparently the large cities do not excel in food sanitation as they do with respect to sanitation of water and milk.

From table 5 it is evident that the majority of the food-borne outbreaks, like those traced to water and milk, were reported by a very few States, with California far in the lead.

In seasonal distribution (table 6) food-borne outbreaks occupied an intermediate position between the water-borne and the milk-borne outbreaks. The outbreaks of dysentery, food poisoning, and gastroenteritis caused by foods had their onset largely during the warmer months, but outbreaks of the other diseases occurred more frequently during cooler weather.

COMPLETENESS OF REPORTING

The evidence indicates that the reports of outbreaks due to water, milk, and other foods received by the Public Health Service during 1939 and discussed in this paper are far from complete.

The increase in the number of outbreaks reported from other foods from 70 in 1938, the first year for which these reports were collected, to 148 in 1939, is probably due, in part at least, to better reporting.

The extreme differences between the large number of outbreaks reported by a few States and the small number or entire absence of reports from many other States are out of all proportion to the relative populations of the States. For example, 1 State, with only one-tenth of the country's population, reported practically one-half of all the water-borne outbreaks. Again, 3 States reported over one-half of all the milk-borne outbreaks. Similarly, 2 States accounted for more than half of all the food-borne outbreaks. From our knowledge of the quality and extent of the public health activities of these States it would be unreasonable to assume that they are below average in environmental sanitation. On the contrary, the logical explanation probably lies in their efficient epidemiological organization for uncovering outbreaks and in their willingness to report such outbreaks. These States are to be congratulated, for their example may encourage neighboring States to improve their efforts in this important field.

ANALYSIS OF HUMAN TUMORS DIAGNOSED AT THE NATIONAL INSTITUTE OF HEALTH, 1920–39 [1]

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Some 8 years ago we were struck by the relative frequency of certain specific tumor types in white seamen, and summarization of the material then available confirmed this impression. However, the series was relatively small and it was decided to await the accumulation of a larger number of cases.

By May 1939, there had accumulated a series of 2,066 malignant tumors occurring in 2,039 individuals. In addition, there were 1,222 benign tumors from 1,219 persons, making a total of 3,288 tumors in 3,247 persons.

The classification followed is based chiefly on Ewing's Neoplastic Diseases (*1*). All malignant and most of the benign tumors were studied personally by the author, and the diagnoses finally used in the tabulation were often revised from the originals in accord with the results of restudy, later biopsies, or autopsy.

Table 1 gives the number of cases and percentage distribution of malignant and "borderline" tumors according to race and sex,

[1] From the Division of Pathology, National Institute of Health.

dividing the white males further into seafaring and nonseafaring (or seamen and landsmen). As it was not possible to estimate the population groups from which these tumors were derived, it was thought that comparison of the percentages of tumors falling into each diagnosis for the several race, sex, and occupation groups would prove of value.

Noteworthy differences are observed in carcinoma of the prostate, which forms 4.6 percent of all malignant tumors in white seamen and only 2.6 percent in landsmen (1.77:1); testis, 2.4 percent in white seamen, 3.4 percent in landsmen (1:1.4); and kidney, 1.9 and 0.9 percent in white seamen and landsmen, respectively (2.11:1). The gastrointestinal tumors show considerable variations in seamen and landsmen (lip 7.0:4.2 percent, oral 4.0:2.5, esophagus 1.4:0.5, stomach 8.2:4.0, intestine and anus 9.5:8.4).

It was thought that these variations might be due to differences in the age distribution of the seafaring and nonseafaring groups. Consequently, all tumors were further segregated according to 10-year age groups of the patients at the time of the first histologic diagnosis.

Table 2 gives the age distribution by decades of all patients with malignant tumors. Since definite differences in age distribution between white seamen and landsmen were found, those tumor types showing differences were further studied in relation to age distribution (table 3).

In regard to the prostatic carcinomas, it seems evident that the seaman-landsman ratio of 1.77:1 is artificial and is due to the larger number of seamen in the older age groups; the ratios vary in the several decades—19:6 in the fifth, 1:1.4 in the sixth, 1.57:1 in the seventh, 1:1.1 in the eighth—at first the seamen and then the landsmen showing the higher rate, with discrepancies remaining small.

The incidence of testicular carcinoma is highest, and approximately equal, in the two groups in the third decade, with a slightly higher incidence in landsmen in the fourth and fifth decades. However, the number of cases is small in the latter age groups.

Renal carcinoma shows a rather striking difference between seamen and landsmen in its decade of highest proportional incidence, the sixth, the proportion between the incidence rates in that decade being 3.3:1. Before and after the sixth decade, the differences in incidence rates are small and probably not significant. The total number of cases is small, and the differences are to be regarded as suggestive only.

Carcinomas of the lip, tongue, and oral cavity show a consistently higher incidence in seamen in all decades in which significant numbers of cases occur. The proportionate difference between seamen and landsmen is least in the fifth and sixth decades, greater in the fourth, seventh, and eighth decades.

TABLE 1.—*Type distribution of tumors by race and sex, all ages*

Tumor	White seamen		White landsmen		White females		Negro males		Negro females		Indian males		Indian females		Male Mongolian, Malaysian, Polynesian	Deficient data	Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Number	Number	Percent
Acanthoma, penis	10	1.0	7	1.1	.....	.....	5	3.7	.....	.....	1	4.3	.....	.....	1	0	24	1.17
Carcinoma, prostate	[1] 46	4.6	17	2.6	.....	.....	6	4.5	.....	.....	1	4.3	.....	.....	.....	.....	70	[1] 3.42
Carcinoma of testis	[2] 24	2.4	[4] 22	3.4	.....	.....	1	.7	.....	.....	1	4.3	.....	.....	.....	.....	43	[2] 2.10
"Benign" teratoma of testis	0	.....	1	.15	.....	.....	0	.....	.....	.....	0	.....	.....	.....	.....	1	2	.10
Retroperitoneal malignant tumors	[3] 10	1.0	[4] [5] 5	.8	.....	.....	0	.....	.....	.....	0	.....	.....	.....	.....	0	15	[4] [5] .73
Benign teratoma, others	3	.3	1	.15	2	1.5	0	.....	.....	.....	0	.....	.....	.....	.....	0	6	29
Carcinoma, cervix	.....	.....	.....	.....	[6] 16	11.8	.....	.....	3	25.0	.....	.....	18	35.3	.....	1	38	[6] 1.85
Carcinoma, uterus	.....	.....	.....	.....	6	4.4	.....	.....	.....	.....	.....	.....	1	2.0	.....	[7] 1	8	[7] .39
Sarcoma, uterus	.....	.....	.....	.....	1	.7	.....	.....	.....	.....	.....	.....	1	2.0	.....	.....	2	.10
Carcinoma, ovary	.....	.....	.....	.....	5	3.7	.....	.....	.....	.....	.....	.....	.....	.....	.....	[7] 1	6	[7] .29
Carcinoma, bladder	21	2.1	17	2.6	.....	.....	3	2.2	.....	.....	1	4.3	.....	.....	.....	1	43	2.10
Carcinoma, renal pelvis	2	.2	3	.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.24
Carcinoma, kidney	19	1.9	6	.9	[6] 2	1.5	1	.7	.....	.....	.....	.....	.....	.....	.....	.....	28	[6] 1.37
Hypernephroma	5	.5	2	.3	.....	.....	2	1.5	.....	.....	.....	.....	.....	.....	.....	1	10	.49
Renal mixed tumor	.....	.....	2	.3	1	.7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.15
Neuroblastoma, adrenal	.....	.....	.....	.....	.....	.....	1	.7	.....	.....	.....	.....	.....	.....	.....	.....	1	.05
Angioendothelioma epididymis	1	.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.05
Sarcoma, myosarcoma, bladder	1	.1	1	.15	1	.7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.15
Sarcoma, breast	.....	.....	.....	.....	1	.7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Carcinoma, breast	4	.4	1	.15	39	28.9	.....	.....	5	41.7	.....	.....	[6] 9	17.7	.....	.....	58	[6] 2.83
Total genito-urinary and breast	146	14.6	85	13.1	73	54.1	19	14.2	8	66.7	4	17.4	29	56.9	1	5	370	18.06
Acanthoma of lip	[8] 70	7.0	27	4.2	1	.7	1	.7	.....	.....	.....	.....	.....	.....	.....	.....	99	[8] 4.83
Carcinoma, tongue, mouth	40	4.0	[10] 17	2.6	.....	.....	3	2.2	.....	.....	.....	.....	.....	.....	.....	.....	60	[10] 2.93
Carcinoma, tonsil, pharynx	[11] 13	1.3	8	1.2	.....	.....	[11] 4	3.0	.....	.....	.....	.....	.....	.....	.....	1	26	[11] 1.27
Carcinoma, salivary glands	[12] 11	1.1	[12] 5	.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	18	[12] [13] .88
Mixed tumors, salivary	[8] 22	2.2	24	3.7	2	1.5	6	4.5	.....	.....	2	8.7	3	5.9	.....	.....	59	[8] 2.88
Adamantinoma	2	.2	1	.15	.....	.....	3	2.2	.....	.....	1	4.3	.....	.....	.....	.....	7	.34

Carcinoma, esophagus	[16] 14	1.4	3	.5			1	.7									18	[14] .88
Carcinoma, stomach	[11] 82	8.2	26	4.0	1	.7	[11] 10	7.5	1	8.3			1	2.0			121	[11] 5.90
Carcinoma, intestines	[1] 77	7.7	[23] 51	7.9	3	2.2	5	3.7			3	13.0	2	3.9			141	[1 23] 6.88
Carcinoma, appendix	9	.9	2	.3			1	.7					3	5.9		1	16	.78
Carcinoma, anus	7	.7	1	.15													8	.39
Biliary carcinoma	8	.8	5	.8	1	.7	3	2.2					1	2.0			18	.88
Hepatoma	4	.4	7	1.1			4	3.0							1		16	.78
Carcinoma, pancreas	[14] 9	.9	12	1.85			6	4.5									27	[14] 1.32
Epulis	4	.4	0														4	.20
Sarcoma	1	.1	2	.3			1	.7									4	.20
Myosarcoma	2	.2	1	.15													3	.15
Neurofibrosarcoma	1	.1	1	.15	1	.7											3	.15
Angioendothelioma	6	.6	2	.3			1	.7		8.3							9	.44
Total gastrointestinal	379	37.8	195	30.1	9	6.7	48	35.8	1	8.3	6	26.1	10	19.6	2	3	653	31.9
Acanthoma	[15 16 17] 70	7.0	[22] 42	6.5	[18] 9	6.7	6	4.5	1	8.3	4	17.4	1	2.0	1	5	139	[15 16 17 18 22] 6.78
Basal cell carcinoma	[15 19 21] 69	6.9	[20 23] 54	8.3	[19] 10	7.4	1	.7			1	4.3	[3] 3	2.0		7	145	[5 15 19 20 21 72] 7.04
Adenoid cystic carcinoma	[15 19] 21	2.1	13	2.0	4	3.0					1	4.3				1	40	[15 19] 1.95
Adnexal adenocarcinoma and carcinoma	[2] 5	.5	2	.3	2	1.5	2	1.5								2	13	[2] 58
Naevocarcinoma melanoma	15	1.5	[20] 15	2.3	2	1.5	1	.7			3	13.0			1	1	38	[20] 1.85
Sarcoma, fibrosarcoma	13	1.3	13	2.0	1	.7	2	1.5			1	4.3					30	1.46
Neurofibroma and sarcoma	[25] 18	1.8	18	2.8	3	2.2	5	3.7									44	[25] 2.15
Myosarcoma			1	.15													1	.05
Angioendothelioma	[25] 5	.5	7	1.1	1	.7	1	.7								1	15	[25] .73
Xanthoma	12	1.2	6	.9	1	.7	2	1.5							1	1	23	1.12
Total, skin	223	22.2	169	26.1	32	23.7	20	14.9	1	8.3	10	43.5	4	7.8	3	18	480	23.43
Carcinoma, lung	27	2.7	26	4.0			7	5.2								2	62	3.03
Carcinoma, larynx	14	1.4	6	.9													20	.98
Carcinoma, nasal and sinus	7	.7	4	.6	1	0.7	2	1.5							1		15	.73
Carcinoma, thyroid	4	.4	8	1.2	3	2.2	1	.7					1	2.0			17	.83
Carcinoma, thymus	2	.2															2	.10
Carcinoma, parathyroid			1	.15													1	.05
Perithelioma, carotid	1	.1	2	.3													3	.15
Angioendotnelioma, nasal			1	.15	1	.7											2	.10
Sarcoma, nasal and sinus	2	.2	1	.15													3	.15
Acanthoma, branchiogenic	5	.5	3	.46	1	.7											9	.44
Transitional cell carcinoma cervical lymph node	10	1.0	[22] 9	1.4									1	2.0			20	[22] .98
Total respiratory	72	7.2	61	9.4	6	4.4	10	7.5					2	3.9	1	2	154	7.52

See footnotes at end of table.

TABLE 1.—*Type distribution of tumors by race and sex, all ages*—Continued

Tumor	White seamen		White landsmen		White females		Negro males		Negro females		Indian males		Indian females		Male Mongolian, Malaysian, Polynesian	Deficient data	Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Number	Number	Percent
Mesothelioma serosal	0		4	0.6			1	0.7								1	6	0.29
Metastatic carcinoma (source?)	26	2.6	25	3	3	2.2	6	4.5	1	8.3			1	2.0			62	3.03
Lymphocytoma, sarcoma	[28] 32	3.2	19	2.9	3	2.2	5	3.7					1	2.0	2		62	[28] 3.03
Myelocytoma, myeloma	11	1.1	9	1.4											1		21	1.03
Hodgkin's and reticulum cell sarcoma	[26] 30	3.0	27	4.2			3	2.2			1	4.3					61	[26] 2.98
Total lymphatic	71	7.1	55	8.5	3	2.2	8	6.0			1	4.3	1	2.0	3	0	142	6.93
Fascial sarcoma	17	1.7	9	1.4	1	.7	4	3.0					1	2.0	1		33	1.60
Neurogenic sarcoma, deep	14	1.4	8	1.2			7	5.2			1	4.3	2	3.9			32	1.56
Myxochondroma, chondrosarcoma	11	1.1	3	.5													14	.68
Bone sarcoma	5	.5	6	.9			5	3.7								1	17	.83
Chordoma	1	.1															1	.05
Angioendothelioma, deep	2	.2															2	.10
Subtotal	50	5.0	26	4.0	1	.7	16	11.9			1	4.3	3	5.9	1	1	99	4.83
Giant cell tumor, tendons and aponeuroses	16	1.6	13	2.0	2	1.5	2	1.5								1	34	1.66
Giant cell tumor, bone	3	.3	1	.15			1	.7					1	2.0			6	.29
Subtotal	19	1.9	14	2.2	2	1.5	3	2.2					1			1	40	1.95
Total locomotor system	69	6.9	40	6.2	3	2.2	19	14.2			1	4.3	4	7.8	1	2	139	6.78
Glioma cerebri	8	.8	7	1.1	1	.7	2	1.5									18	.88
Retinoblastoma					2	1.5			1	8.3	1	4.3					4	.20
Angiosarcoma meningeal	4	.4	1	.15	1	.9											6	.29
Orbital psammoma			1	.15													1	.05
Neurofibrosarcoma cauda equina	1	.1	1	.15													2	.10

Lacrimal carcinoma	1	.1															1	.05
Melanosarcoma choriold	4	.4	5	.8	2	1.5							1	2.0			12	.59
Acanthoma conjunctival	1	.1					1	.7								1	3	.15
Total central nervous system and eye	19	1.9	15	2.3	6	4.4	3	2.2	1	8.3	1	4.3	1	2.0		1	47	2.29
Total cases, malignant and borderline	1,003	100.0	648	100.0	135	100.0	134	100.0	12	100	23	100	51	100.0	11	32	2,049	100.0
Total tumors	1,023	102.0	653	100.8	138	102.2	135	100.7	12	100	23	100	53	104.0	11	33	2,071	101.1

[1] 1 case entered under carcinoma of intestine and of prostate.
[2] 1 case entered under carcinoma of prostate and of cutaneous glands.
[3] 3 cases under each heading showed teratoma as well.
[4] 2 cases under each heading showed teratoma as well.
[5] Includes 1 case of rhabdomyosarcoma.
[6] 1 case under carcinoma of cervix and of kidney.
[7] 1 case under carcinoma of uterus and of ovary.
[8] 1 case under carcinoma of breast and basal cell epithelioma of skin.
[9] 1 case under acanthoma of lip and salivary mixed tumor.
[10] 1 case with 2 independent tumors 1 year apart.
[11] 2 cases under carcinoma of pharynx and of stomach, 1 white seaman, 1 Negro male.
[12] 3 cases showed also mixed tumor elements, but not entered under that heading.
[13] 1 case showed mixed adenocarcinoma and chondrosarcoma, not entered under the second.
[14] 1 case under carcinoma of esophagus and of pancreas.
[15] 1 case with 1 acanthoma, 2 basal cell and 1 adenoid cystic epithelioma of skin, white seaman.
[16] 1 case with 3 acanthomas, white seaman.
[17] 1 case with 2 acanthomas, white seaman.
[18] 1 case with acanthoma and basal cell epithelioma, white female.
[19] 1 case with basal cell and adenoid cystic epitheliomas, white seaman.
[20] 1 case with basal cell epithelioma and cutaneous melanoma, white landsman.
[21] 1 case with 2 basal cell epitheliomas, white seaman.
[22] 1 case with acanthomata of skin and of cervical lymph nodes and basal cell epithelioma, white landsman.
[23] 2 cases with 2 carcinomas of intestine, both white landsmen.
[24] 1 case with carcinomas of both breasts.
[25] 1 case with neurofibroma and angioendothelioma of skin.
[26] 2 cases diagnosed first under lymphocytic, later under Hodgkin's.

Cases in which 2 diagnoses were made on the same tumor or same process as under footnote 2 are counted as 1 tumor under total tumors; in those in which apparently independent tumors were present, these are counted separately under total tumors.

W=white; B=negro; I=Indian; L=landsman; M=male; F=female; S=seaman.

TABLE 2.—*Age distribution by decades of malignant and borderline tumor cases by race and sex*

	Under 10		10–19		20–29		30–39		40–49		50–59		60–69		70+		Unknown		Total	
	Number	Per 1,000	Number	Per 1,000	Number	Per 1,000	Number	Per 1,000	Number	Per 1,000	Number	Per 1,000	Number	Per 1,000	Number	Per 1,000	Number	Per 1,000	Number	Per 1,000
White seamen	0		2	2.0	101	100	137	136	211	211	257	256	202	201	78	78	15	15	1,003	1,000
White landsmen	2	3.1	6	9.3	43	67.0	145	221.2	174	269.4	147	227.3	91	140.2	26	40.5	14	21.8	648	1,000
White females	1	7.4	2	7.4	9	66.7	19	140.7	25	192.6	34	251.8	18	133.3	6	44.4	21	155.5	135	1,000
Negro males	0		4	29.8	12	89.6	23	171.6	52	388.0	24	179.1	13	97.0	6	44.8	0		134	1,000
Negro females	1	8.3	1	8.3	3	25.0	4	33.3	1	8.3	1	8.3	0		0		1	8.3	12	1,000
Indian males	1	41.7	1	41.7	1	83.4	1	41.7	3	125.0	4	166.7	6	250.0	2	83.4	4	166.7	23	1,000
Indian females	1	20.0	2	40.0	6	100.0	3	60.0	14	280.0	10	200.0	10	200.0	2	40.0	3	60.0	51	1,000
Mongolian and Malaysian males					2	200.0	3	200.0	3	300.0	1	100.0					2	200.0	11	1,000
Unclassified					1	32.2	1	32.2			1	32.2	1	32.2	1	32.2	27	838.5	32	1,000
Total	6	2.9	18	8.3	178	85.3	336	161.8	483	237.3	479	234.8	341	166.7	121	59.3	87	42.2	2,049	1,000

TABLE 3.—*Comparison of incidence rates of certain tumors in the various decades of life between white male seamen and landsmen*

	20–29		30–39		40–49		50–59		60–69		70 and over		Total	
	S	L	S	L	S	L	S	L	S	L	S	L	S	L
Carcinoma, prostate					1.9	0.6	2.3	3.4	13.9	8.9	10.4	11.5	4.6	2.6
Carcinoma, testis	11.0	11.6	5.1	7.75	1.4	3.5	.8		.5				2.4	3.4
Carcinoma, kidney	1.0		.7	1.4	.5	.6	4.65	1.4	1.5	1.1	1.3		1.9	.9
Carcinoma, lip	1.0	4.6	7.3	2.8	5.2	4.0	8.5	6.2	9.9	5.6	5.2		7.0	4.2
Carcinoma, tongue and mouth			.7	.7	3.3	2.9	5.8	4.8	5.0	2.2	6.5	3.8	4.0	2.5
Carcinoma, esophagus					.5		2.7		2.5	2.2	1.3		1.4	.5
Carcinoma, stomach	2.0	4.6	5.9	4.2	9.4	3.5	13.6	3.4	6.9	6.7	2.6	3.8	8.2	4.0
Carcinoma, intestines	9.0	2.3	4.4	10.5	11.7	8.7	8.1	8.9	12.4	10.0	11.7	3.8	9.5	8.4
Hepatoma				1.4	.5	1.2	.4	1.4	1.0			3.8	.11	1.1
Carcinoma, pancreas			.7		.5	2.3	1.9	.7	.5	5.0	1.3	3.8	.09	1.9
Biliary carcinoma					1.4	1.2	.4	.7	1.5	1.0		3.8	.08	.8
Carcinoma, lung, larynx	1.0		1.5	1.4	4.9	6.9	3.1	5.5	2	3.3		3.8	2.6	4.1
All malignant tumors	100	100	100	100	100	100	100	100	100	100	100	100	100	100

The number of cases of carcinoma of the esophagus is too small to have much significance, but the difference between seamen and landsmen is not explained by differences in age distribution.

There is no significant difference in the incidence of stomach carcinoma in the third, fourth, seventh, and eighth decades, while the incidence in seamen is three to four times as high as in landsmen in the two decades of maximum proportionate incidence, the fifth and sixth. Intestinal and anal carcinoma, with nearly equal total incidence in the two groups, shows no significant difference in any age group.

The greater incidence of lung carcinoma in landsmen (4.1:2.6 percent) is consistent through the decades of maximum proportionate incidence (fifth, sixth, and seventh) and greatest in the sixth.

When the group of white seamen is broken down into the traditional three divisions of deck, engine-room, and stewards' departments (table 4), it is seen that while, for example, gastrointestinal tumors make up 36 to 39 percent of all malignant tumors in the three groups, acanthoma of the lip causes 7.4 percent of all malignancies in the deck force and only 4 to 4.3 percent in the engine-room and stewards' forces. The latter figure is essentially the same as in white landsmen (4.2 percent). Tongue and mouth cancers are also relatively higher in the deck force (5.1 percent), but the difference is smaller. The deck force shows about the same proportion of stomach and intestinal cancers (8.3 and 8.9 percent), the engine-room workers more stomach cancer than intestinal (10.1 and 8.5 percent), and the stewards' force presents a higher incidence but similar proportions to the white landsmen (6.9 and 12.9 percent compared with 4 and 8.3 percent). For skin tumors, the deck force shows the highest incidence (19.3 percent), the engine group intermediate (17.6 percent), and the stewards' force the lowest (12.9 percent). The acanthomas show the most difference; the basal cell group the least. Small differences are seen in the incidence of genitourinary tumors; the highest incidence is in the engine-room group, the least in the stewards' force. Tumors of the supporting tissues show similarly small variations. Lymphatic tumors seem more frequent in the stewards' force (11.9 percent) than in deck and engine groups (7.4 and 5.8 percent). The landsmen showed an incidence like that in the latter groups (8.1). Tumors of the lung were lowest in deck and stewards' groups (2.4 and 2 percent), higher in the engine-room force (3.2 percent), but still lower than in white landsmen (4.05 percent).

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TABLE 4.—*Segregation of tumors of seamen according to place of employment on board ship*

SKIN

	Watchmen, seamen, merchant seaman, Coast Guard [1]		Deck, surfman, pilot		Engine		Steward		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Angioendothelioma	3	0.8	1	0.3	1	0.5	0	------	5	0.5
Acanthoma	30	7.9	27	8.0	9	4.8	4	4.0	70	7.0
Basal cell	36	9.5	19	5.6	8	4.3	6	5.9	69	6.9
Adenoid (cystic)	13	3.4	4	1.2	2	1.1	2	2.0	21	2.1
Adnexal adenoma	3	.8	0	------	1	.5	1	1.0	5	.5
Naevomelanoma malignum	8	2.1	4	1.2	3	1.6	0	------	15	1.5
Sarcoma fibrosarcoma	4	1.1	6	1.8	3	1.6	0	------	13	1.3
Neurosarcoma	12	3.2	2	.6	2	1.1	2	------	18	1.8
Xanthoma, giant cell	5	1.3	3	.9	4	2.1	0	------	12	1.2
	114	30.1	66	19.6	33	17.6	15	12.9	228	22.8
	−4	1.1	−1	0.3	------	------	------	------	−5	0.5
Total	110	29.0	65	19.3	33	17.6	15	12.9	223	22.3

GENITOURINARY

Acanthoma, penis	2	0.5	4	1.2	4	2.1	0	------	10	1.0
Carcinoma, prostate	14	3.7	20	6.0	9	4.8	3	3.0	46	4.6
Carcinoma, testis	12	3.2	3	.9	7	3.7	2	2.0	24	2.4
Teratoma and embryonal carcinoma	2	.5	3	.9	2	1.1	2	2.0	9	.9
Carcinoma, bladder	5	1.3	10	3.0	3	1.6	3	3.0	21	2.1
Carcinoma and hypernephroma, kidney, renal pelvis	2	.5	12	3.6	9	4.8	3	3.0	26	2.6
Carcinoma, breast	0	------	3	.9	1	.5	0	------	4	.4
	37	------	55	------	35	------	13	------	140	------
Sarcoma	------	------	1	------	2	1.1	------	------	3	.3
Total	37	9.8	56	16.7	37	19.7	13	12.9	143	14.2

SUPPORTING TISSUES

Myxoma, sarcoma	1	0.3	------	------	------	------	------	------	1	0.1
Deep fibroblastic and fibrosarcoma	7	1.8	5	1.5	2	1.1	2	2.0	16	1.6
Neurosarcoma deep	2	.5	6	1.8	4	2.1	2	2.0	14	1.4
Chondrosarcoma, chordoma	1	.3	4	1.2	5	2.7	2	2.0	12	1.2
Bone sarcoma	2	.5	1	.3	1	.5	1	1.0	5	.5
Xanthoma of tendons and aponeuroses	7	1.8	4	1.2	4	2.1	1	1.0	16	1.6
Giant cell bone	1	.3	------	------	2	1.1	------	------	3	.3
Angioendothelioma, deep	1	.3	1	.3	------	------	------	------	2	.2
Total	22	5.8	21	6.2	18	9.6	8	7.9	69	6.9

EYE AND CENTRAL NERVOUS SYSTEM

Glioma cerebri	4	1.1	2	0.6	2	1.1	0	------	8	0.8
Angiosarcoma meningeal	2	.5	3	.9	0	------	0	------	5	.5
Melanosarcoma chorioid	1	.3	3	.9	0	------	0	------	4	.4
Neurosarcoma cauda equina	0	------	1	.3	0	------	0	------	1	.1
Acanthoma conjunctival	0	------	0	------	0	------	1	1.0	1	.1
Total	7	1.8	9	2.7	2	1.1	1	1.0	19	1.9

[1] This group includes "retired," "Coast Guard," and "watchmen." Note high incidence of skin tumors.

TABLE 4.—*Segregation of tumors of seamen according to place of employment on board ship*—Continued

	Watchmen, seamen, merchant seamen, Coast Guard		Deck, surfman, pilot		Engine		Steward		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
LYMPHATIC										
Lymphosarcoma and -cytoma	10	2.6	11	3.3	7	3.7	4	4.0	32	3.2
Myelosarcoma and -cytoma	2	.5	6	1.8	0	-------	3	3.0	11	1.1
Reticulosarcoma and Hodgkin's	12	3.2	8	2.4	4	2.1	6	5.9	30	3.0
	24	6.3	25	7.4	11	5.8	13	12.9	73	7.3
	−1	6.3	-------	-------	-------	-------	−1	1.0	−2	.2
Total	23	6.1	25	7.4	11	5.8	12	11.9	71	7.1
RESPIRATORY										
Carcinoma, lung	10	2.6	8	2.4	6	3.2	2	2.0	26	2.6
Carcinoma, larynx	7	1.8	3	.9	2	1.1	2	2.0	14	1.4
Nasal and sinus carcinoma	3	.8	2	.6	2	1.1	0	-------	7	.7
Carcinoma, thyroid	2	.5	0	-------	0	-------	2	2.0	4	.4
Carcinoma, neck and branch	4	1.1	5	1.5	2	1.1	4	4.0	15	1.5
Antral sarcoma	0	-------	1	.3	0	-------	1	1.0	2	.2
Thymic carcinoma	0	-------	2	.6	0	-------	0	-------	2	.2
Carotid tumor	0	-------	1	.3	0	-------	0	-------	1	.1
Total	26	6.9	22	6.5	12	6.4	11	10.9	71	7.1
SOURCE UNDETERMINED										
Carcinoma	11	2.9	7	2.1	7	3.7	2	2.0	27	2.7
GASTROINTESTINAL										
Acanthoma, lip	33	8.7	25	7.4	8	4.3	4	4.0	70	7.0
Carcinoma, tongue, mouth	12	3.2	17	5.1	8	4.3	3	3.0	40	4.0
Carcinoma, tonsil and pharynx	5	1.3	3	.9	3	1.6	2	2.0	13	1.3
Carcinoma, salivary glands	4	1.1	4	1.2	2	1.1	1	1.0	11	1.1
Carcinoma, esophagus	5	1.3	6	1.8	1	.5	2	2.0	14	1.4
Carcinoma, stomach	28	7.4	28	8.3	19	10.1	7	6.9	82	8.2
Carcinoma, intestine	28	7.4	27	8.0	11	5.8	13	12.9	79	7.9
Carcinoma, appendix	4	1.1	2	.6	3	1.6	0	-------	9	.9
Rectal acanthoma	4	1.1	1	.3	2	1.1	0	-------	7	.7
Carcinoma gall bladder and biliary tract	3	.8	5	1.5	0	-------	0	-------	8	.8
Hepatoma	0	-------	2	.6	0	-------	2	2.0	4	.4
Carcinoma, pancreas	0	-------	2	.6	4	2.1	3	3.0	9	.9
Adamantinoma	0	-------	2	.6	0	-------	0	-------	2	.2
Salivary mixed tumor	10	2.6	4	1.2	9	4.8	2	2.0	25	2.5
Epulis	3	.8	1	.3	0	-------	0	-------	4	.4
Angioendothelioma	4	1.1	2	.6	0	-------	0	-------	6	.6
Sarcoma	2	.5	2	.6	0	-------	0	-------	4	.4
	145	38.3	133	39.6	70	37.2	39	38.6	387	38.5
	−1	.3	−2	.6	−1	-------	-------	-------	−4	.4
Total	144	38.0	131	39.0	69	36.7	39	38.6	383	38.1
ALL MALIGNANT TUMORS										
Skin	110	29.0	65	19.3	33	17.6	15	14.8	223	22.2
Genitourinary	37	9.8	56	16.7	37	19.7	13	12.9	143	14.2
Lymphatic tumors	23	6.1	25	7.4	11	5.8	12	11.9	71	7.1
Eyes and central nervous system	7	1.8	9	2.7	2	.4	1	1.0	19	1.9
Respiratory	26	6.9	22	6.5	12	6.4	11	10.9	71	7.1
Supporting tissues	22	5.8	21	6.2	18	9.6	8	7.9	69	6.9
Gastrointestinal	144	38.0	131	39.0	69	36.7	39	38.6	383	38.1
Source undetermined	11	2.9	7	2.1	7	3.7	2	2.0	27	2.7
Total	380	100.3	336	100.0	189	100.5	101	100.0	1,006	100.2
Duplicates	1	.3	-------	-------	1	.5	-------	-------	2	.2
Net	379	100	336	100	188	100	101	100	1,004	100

TABLE 5.—*Age and race in relation to female genital and breast cancers*

	20–29			30–39			40–49			50–59			60–69			70+			Total		
	White	Negro	Indian	White	Negro	Indian	White	Negro	Indian	White	Negro	Indian	White	Negro	Indian	White	Negro	Indian	White	Negro	Indian
Carcinoma, cervix	1	---	1	3	---	1	5	---	6	4	---	5	1	---	3	0	---	1	16	---	18
Carcinoma, uterus	0	---	1	0	---	0	2	---	0	1	---	0	2	---	0	0	---	0	6	---	1
Sarcoma, uterus	0	---	0	0	---	0	0	---	0	0	---	0	1	---	1	---	---	0	1	---	1
Carcinoma, ovary	0	---	0	0	---	0	0	---	0	3	---	0	1	---	0	0	---	0	5	---	0
Carcinoma, breast	2	---	1	5	3	1	8	---	2	12	1	3	4	---	2	2	---	0	39	5	9
All malignant tumors	9	2	5	19	3	3	26	0	14	34	1	10	18	0	10	6	0	2	135	9	50

In table 1, we note that the white women had about 17 percent malignant uterine tumors and 29 percent breast cancers, while Indian women showed 40 percent uterine and 18 percent breast tumors. No explanation for these differences is found in the ages of the patients (table 5). Quinland and Cuff (*9*) reported 51.4 percent uterine cancers and 29.4 percent breast tumors in Tennessee Negro women.

In 135 male Negroes, lip carcinoma occurred once, stomach cancer was about as frequent as in white males, intestinal carcinoma was less frequent, while carcinomas of liver, biliary tract, and pancreas appeared in 9.5 percent (13 cases) compared with 3.8 percent (24 cases) in white landsmen and 2.1 percent (21 cases) in seamen. Skin carcinoma and melanoma were infrequent (10 cases, 7.5 percent) (white seamen, 180 cases, 18 percent, landsmen, 126 cases, 19.6 percent), sarcoma and xanthoma cutis slightly more frequent (10 cases, 7.5 percent) than in white males (48 and 45 cases, 4.8 and 7.0 percent, for seamen and landsmen, respectively). Penile acanthoma occurred in 5 Negroes (3.7 percent as compared with 1 in white seamen and 1.1 percent in white landsmen); other urogenital tumors were similar in frequency to those in white males except that there was only 1 case of testicular carcinoma among the Negroes. There were 6 cases of lung carcinoma (4.5 percent, as compared with 2.6 and 4.1 percent in white seamen and landsmen, respectively). Other respiratory tract and lymphatic tumors showed incidences similar to those in white males. Sarcomas and giant cell tumors of the locomotor system constituted 14 percent of all tumors in Negro males (6.9 and 6.7 percent in white males). Giant cell tumors, whether cutaneous, epulis, fascial, or bone, show similar incidence in white and Negro males. When all sarcomas are considered, they comprise 10.9 percent of all tumors in white seamen, 13.7 percent in landsmen, 10.4 percent in white females, 20.1 percent in Negro males, 8.3 percent in Indian males, and 10 percent in Indian females.

TABLE 6.—*Tabulation of all sarcomas, by age, sex, and race*

	10–19		20–29		30–39		40–49		50–59		60–69		70 and over		Age unknown		Total	
	Number	Percent[1]	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
White seamen	2	100.0	25	25.0	24	17.6	24	11.3	21	8.1	8	4.0	2	2.6	3	20.0	109	10.9
White landsmen	2	33.3	11	25.6	25	17.6	25	14.4	14	9.6	5	5.6	1	3.8	5	35.7	88	13.7
White females	1	100.0	0	-----	3	16.3	0	-----	3	8.5	2	11.1	0	-----	5	23.8	14	10.4
Negro males	4	100.0	2	16.7	6	26.1	12	23.1	1	4.2	2	15.4	---	-----	---	-----	27	20.1
Negro females	---	-----	---	-----	---	-----	---	-----	---	-----	---	-----	---	-----	---	-----	---	0
Indian males	---	-----	---	-----	---	-----	---	-----	---	-----	1	16.7	---	-----	1	25.0	2	8.3
Indian females	---	-----	---	-----	---	-----	1	7.1	---	-----	2	20.0	1	50.0	1	33.3	5	10.0
Other males	---	-----	---	-----	---	-----	---	-----	---	-----	---	-----	---	-----	---	-----	---	0
Unknown	---	-----	---	-----	---	-----	---	-----	---	-----	---	-----	---	-----	3	11.5	3	9.7
Total	9	53.0	38	21.8	58	17.6	62	12.8	39	8.1	20	5.9	4	3.3	18	20.9	248	12.2
Sarcomas	---	5.3	---	20.1	---	30.7	---	32.8	---	20.6	---	10.6	---	2.1	---	9.5	---	100
All tumors	---	.83	---	8.5	---	16.2	---	23.7	---	23.5	---	16.7	---	5.9	---	4.2	---	100

[1] These percentages refer to the total number of tumors in the age and sex group for the decade.

Analysis of these sarcomas according to age of patients, presented in table 6, shows that the increased incidence in Negro males is not assignable to age differences. The high proportion of sarcomas as compared with other tumors in the younger age groups is in accord with usual findings. The close correspondence of the proportionate incidence of sarcomas in white seamen and landsmen in the various decades is of interest. Seamen might be thought to be more subject to traumatism and yet landsmen show a slightly higher proportion of sarcomas. This difference, however, lies entirely in the skin sarcomas (3.6 percent in seamen, 6.3 percent in landsmen; other sarcomas 7.3 and 7.4 percent).

DISCUSSION

Series comparable to the present one are hard to find. Dorn's report (*2*) lists 9,863 cases with microscopic diagnoses, but these were not segregated by sex or color, and his table of distribution by sex and color is not comparable because the percentage of histologic examinations varied very considerably from site to site. Mountin, Dorn, and Boone's report (*3*) was of similar type. Gover's recent report (*4*) deals with reported mortality and, moreover, makes no distinction as to specific tumor types.

The recent report of Quinland and Cuff (*9*) on tumors in 300 Tennessee Negroes gives figures comparable to ours on this racial group. There were very few Negro women in our series. It is apparent that the males of their series were older than ours (median in the fifth decade in our series, in the sixth in theirs), and this probably accounts for their relatively high incidence of prostatic carcinoma (37.8 percent, as compared with 4.5 percent in our series). Stomach

cancers showed comparable frequencies in Negro males in both series, 7.5 percent in our series, and 9.7 percent in theirs, assuming that all 8 cases were in males. The incidence of liver and pancreatic tumors in Negro males is high in both series (7.5 percent in ours and 8.5 percent in theirs).

TABLE 7.—*Number and percentage distribution of microscopically diagnosed cases of cancer, Chicago, Ill., 1937*

[From Dorn (2), Appendix table 1]

	Cases	Percent		Cases	Percent
Lip	277	2.81	Others	72	0.73
Tongue	176	1.78			
Mouth	54	.55	Total	494	5.01
Jaw	90	.91			
Pharynx	34	.34	Uterus	1,544	15.65
Others	177	1.79	Kidneys	139	1.41
			Prostate	363	3.68
Total	808	8.19	Bladder	433	4.39
			Others	476	4.82
Esophagus	118	1.20			
Stomach, duodenum	573	5.81	Total	2,955	29.95
Intestines	575	5.83			
Rectum, anus	689	6.98	Breast	1,835	18.60
Liver and bile ducts	130	1.32	Skin	741	7.52
Pancreas	80	81	Brain	67	.68
Peritoneum	43	.44	Bones	170	1.72
			Others	585	5.93
Total	2,208	22.40			
			Total	3,398	34.45
Larynx	217	2.20			
Lung, pleura	205	2.08	Grand total	9,863	100.00

DETAILED DIAGNOSTIC CLASSIFICATION

Under acanthoma of lip are included 2 cases classed as transitional cell epithelioma, 1 as basal cell epithelioma, 1 as adenoid epithelioma (noncystic), and the remaining 96 as acanthoma.

Under carcinoma of tongue and oral cavity are included 18 tumors of the tongue, 6 of the lower jaw, 6 of the palate and upper jaw, 1 of the uvula, 11 of the cheek, 10 of the floor of the mouth, 2 of the gums, and 6 of the oral mucosa. Acanthoma was diagnosed in 53 cases, transitional cell carcinoma in 6, and adenoid cystic epithelioma of the undersurface of the tongue in 1.

Under carcinoma of the tonsils and pharynx are included 11 pharyngeal, 10 tonsillar, and 5 faucial tumors. Transitional cell carcinoma was diagnosed in 8 cases, acanthoma in 17, and adenoid cystic epithelioma of the pharynx in 1.

Carcinoma of salivary and lacrimal glands included 8 parotid tumors, 3 submaxillary, 1 each of face, pharynx and lacrimal glands, and 3 salivary gland tumors; 2 were classed as carcinoma, 8 as transitional cell epithelioma, 4 as adenocarcinoma, 1 as adenocarcinoma with chondrosarcomatous stroma, and 2 as adenoacanthoma (of the submaxillary and lacrimal glands, respectively).

Of 17 acanthomas and 1 adenocarcinoma of the esophagus, 4 were cervical, 6 thoracic, 6 at the cardia, and 2 of the esophagus.

Stomach carcinomas were diffuse in 4 cases, not located in 30, in the antrum and pylorus in 55, in the fundus, greater or lesser curvature, or anterior or posterior wall in 22, and cardia in 12; 8 cases were classed as fibrosing or scirrhous carcinoma, 10 as fibrosing or scirrhous adenocarcinoma, 12 as mucous carcinoma or adenocarcinoma, 6 as papillary adenocarcinoma, 19 as carcinoma, 62 as adenocarcinoma, 3 as carcinoma arising in chronic peptic ulcer, 2 as pyloric adenoacanthoma and 1 as acanthoma of the greater curvature.

TABLE 8.—*Known locations and types of gastric carcinoma in white seamen and landsmen, percentage incidence*

	Antrum and pylorus	Fundus and curvatures	Cardia	Mucous and scirrhous
White seamen	54	28	17	20
White landsmen	73	14	5	38

Intestinal carcinomas arose in the duodenum in 5 cases, jejunum and ileum in 4, cecum and ascending colon in 16, flexures, transverse and descending colon in 11, sigmoid in 22, rectum in 63, colon in 20, and intestine in 1. Carcinoma was diagnosed in 10 cases, adenoma malignum in 13, adenocarcinoma in 52, papillary adenocarcinoma in 26, mucous carcinoma in 2, mucous adenocarcinoma in 24, papillary mucous adenocarcinoma in 5, mucoscirrhous carcinoma in 1, scirrhous and fibrocarcinoma and fibro-adenocarcinoma in 9. There were also 8 acanthomas of the anus.

In white seamen 40 percent of intestinal tumors were adenocarcinomas and 18 percent mucous carcinomas; in landsmen these percentages were 28 and 26 percent, respectively.

Appendicial tumors were classed as adenocarcinoma in 2 cases, carcinoma in 1, adenocarcinomyoma in 1, lipoid-bearing carcinoid in 7, and lipoid-free carcinoid in 5.

Gall bladder and duct adenocarcinomas were intrahepatic in 4 cases and involved the common duct in 5 and the gall bladder in 10.

Of 16 cases of hepatoma, 1 was associated with hemochromatosis (*5*) and 13 with hepatic cirrhosis.

Carcinoma of the pancreas involved the head in 14 cases, the body in 3, the tail in 1, head and body in 2, and body and tail in 1. It was diffuse in 3 cases and not specifically located in 3. The type was duct adenocarcinoma in 17, mucous adenocarcinoma in 1, carcinoma in 7, and scirrhous carcinoma in 2.

The varieties of adamantinoma encountered were plexiform epithelioma in 2 cases, glandular in 1, mixed plexiform epithelioma and acanthoma in 2, mixed plexiform epithelioma and glandular in 1, and mixed acanthoma and grandular in 1.

Salivary mixed tumors were found in the parotid in 28 cases, submaxillary in 13, neck in 8, palate, fauces, and jaw in 5, nose and upper lip in 6, and in the 2 the location was not given. Histologic elements present in 69 specimens from 62 salivary mixed tumors are shown in table 9. In 3 cases definite carcinoma formed part of the tissue in an original, a second, and a third operative specimen, respectively.

TABLE 9.—*Histologic elements present in 69 specimens from 62 cases of salivary mixed tumor*

Number of specimens	Tubules	Masses of fusiform epithelial cells	Myxoma	Cartilage	Fibrous tissue	Bone
39	+	+	+	+	−	−
12	+	+	+	−	−	−
6	+	+	+	−	+	−
4	−	+	+	−	−	−
2	−	+	+	−	+	−
1	−	+	+	−	−	+
1	+	+	+	+	−	+
1	+	+	+	−	−	+
1	+	+	+	+	+	−
1	+	−	+	+	−	−
1	+	[1]+	+	+	−	−
69	62	68	69	43	9	3

[1] Grading into typical prickle cells.

Gastrointestinal angioendotheliomas were located in the lip in 4 cases, cheek in 2, and palate, gum, and anus in 1 each.

Among the lung cancers were 36 cases of solid carcinoma originally diagnosed variously as carcinoma, transitional cell carcinoma or epithelioma, spindle cell, columnar cell, or cylindrical cell carcinoma, 15 cases of adenocarcinoma diagnosed as papillary, mucous, or unqualified adenocarcinoma, and 9 cases of acanthoma or mixed acanthoma and transitional cell carcinoma. The right lung was involved in 29 cases, the left in 15. Tumors were median or bilateral in 9, and in 7 location was unknown.

Thyroid cancers included 6 cases of the so-called adenoma malignum, 3 of adenocarcinoma (1 toxic), 1 of papillary cystadenocarcinoma, 1 of scirrhous adenocarcinoma, 1 of von Getzowa's struma, 3 of carcinoma, 1 of transitional cell epithelioma, and 1 of Hürthle cell carcinoma. The last 5 were fatal.

Two thymic tumors were transitional cell epithelioma.

Cases classed as transitional cell epithelioma in cervical lymph nodes included 57 cases on original examination. Sources were later determined as lung in 4, tonsil in 2, buccal mucosa in 3, thyroid in 1, testis in 1, lip in 2, pharynx in 3, and undetermined in 20 cases. Of the last, 3 cases were possibly branchiogenic in origin.

Laryngeal carcinoma was classed as acanthoma in 11 cases, as transitional cell epithelioma in 5, as carcinoma in 2, as basal cell epithelioma

in 1, and at biopsy as transitional cell epithelioma and at autopsy as acanthoma in 1.

Nasal and paranasal sinus tumors were classed as transitional cell or cylindrical cell carcinoma in 11 cases, as mixed transitional cell epithelioma and acanthoma in 1, as acanthoma in 1, as basal cell epithelioma in 1, and as adenoid cystic epithelioma in 1. Both of the last were in the maxillary sinus. These sinuses gave rise to 4 other tumors, the sphenoid and ethmoid area to 1, the nasal passages to 3, and the nasopharynx to 5.

Carcinoma of the testis involved the right testis in 32 cases, the left in 15, and in 1 the location was not recorded. The type was embryonal carcinoma in 18 cases, 1 with coincident teratoma; embryonal adenocarcinoma in 14 (4 with teratoma); embryonal carcinoma with lymphoid stroma in 4; papillary adenocarcinoma in 4; chorionepithelioma in 2; mixed embryonal carcinoma, chorionepithelioma, and teratoma in 1; and spindle cell sarcoma in 1.

Two further cases of apparently benign teratoma of the testis and 2 of the ovary were diagnosed. Two mediastinal teratomas and 1 predominantly neural teratoma of the nasal region were encountered.

The retroperitoneal tumors included an apparently benign teratoma, a teratoma with a metastasizing embryonal carcinoma, a fibroblastic sarcoma, a rhabdomyoma, and 7 embryonal carcinomas.

Carcinoma of the cervix uteri was classed as carcinoma or transitional cell or spindle cell epithelioma in 23 cases and as acanthoma in 15. The two types showed no significant variation in frequency with race. Corpus carcinoma was classed in 5 cases as adenocarcinoma and in 1 each as carcinoma, papillary adenocarcinoma, and chorionepithelioma. There were 2 ovarian carcinomas and 4 papillary adenocarcinomas.

Bladder carcinomas were diagnosed as carcinoma in 4 cases, spindle cell carcinoma in 2, adenocarcinoma in 2, transitional cell epithelioma in 11, papillary epithelioma in 21, and acanthoma in 3. Tumors were papillary in 13 of 21 white seamen and in 6 of 17 white landsmen.

Carcinomas of the renal pelvis were diagnosed as papillary epithelioma in 4 cases and transitional cell epithelioma in 1. Renal carcinomas were classed as embryonal carcinoma in 1 case and as adenocarcinoma in 27. Of the latter, 13 showed papillary structure, 19 were of clear cell type, 3 granular cell, and 5 mixed or undesignated as to cell type. In 10 cases renal tumors of clear cells without tubular structure were designated as hypernephroma. Other renal and adrenal tumors included 1 case of neuroblastoma of the adrenal, 1 of renal adenomyosarcoma, 1 of renal leiomyosarcomatosis, and 1 of renal leiomyoliposarcoma.

The diagnosis and race and sex distribution of breast cancers are shown in table 10.

TABLE 10.—*Breast cancers by diagnosis, sex, and race*

	White males	White females	Negro females	Indian females	Total	Known dead	Known living
Carcinoma	0	10	0	5	15		
Duct carcinoma	0	2	0	1	3	7	5
Mucous carcinoma	0	0	1	0	1		
Scirrhous carcinoma	1	11	2	0	14	4	4
Adenocarcinoma	3	11	2	2	18		
Duct adenocarcinoma	0	3	0	1	4	7	11
Comedo carcinoma	1	1	0	0	2		
Adenoacanthoma sarcomatodes [1]	0	1	0	0	1		
Total	5	39	5	9	58		

[1] See ref. 7.

One patient had 3 independent acanthomas of axilla, hand, and scrotum, 3 had 2 independent acanthomas as follows: face and right ear, neck and nose, neck and face. The total of 144 tumors in 139 patients was distributed as follows: face 68, neck 12, trunk 2, genitals 8, arm, forearm, and shoulder 4, wrist 4, hand 25, lower extremity 12, unknown 5, and 4 petrifying epitheliomas in subcutaneous cysts of the arm, forearm, neck, and flank. There appears to be a significant difference in location of the tumors in white seamen and white landsmen. The former show 85 percent of the tumors on the face, neck, and hands, while in the landsmen only 69 percent of the acanthomas are in these exposed areas. The deck force (60 tumors) showed a slightly higher concentration of tumors on these exposed parts (87 percent) than other seamen, and of the 42 landsmen, 21 outdoor workers had only 67 percent of tumors in exposed areas, a slightly lower rate than for all landsmen. It would appear that outdoor exposure is not particularly significant in this group.

In a further effort to determine the cause of the increased proportional incidence in white seamen of cutaneous acanthoma on exposed parts of the body, the cases were segregated according to the geographic location of the hospitals furnishing the material (table 11).

TABLE 11.—*Geographic origin of cases of cutaneous acanthoma and relation to anatomical sites*

	North Atlantic	South Atlantic and Gulf	Pacific	Total, salt water	Great Lakes	Inland	Total, fresh water	North of 37° N.	South of 37° N.	Total
Exposed parts:										
Number	32	22	13	67	9	30	39	41	65	106
Percent	84.2	81.5	100	85.9	75	60	62.9	75.9	75.6	75.7
Covered parts:										
Number	6	4	0	10	3	16	19	13	16	29
Percent	15.8	14.8	0	12.8	25	32	30.6	24.1	18.6	20.7
Unknown:										
Number	0	1	0	1	0	4	4	0	5	5
Percent	0	3.7	0	1.3	0	8	6.5	0	5.8	3.6
Total										
Number	38	27	13	78	12	50	62	54	86	140
Percent	100	100	100	100	100	100	100	100	100	100

It appears from this table that cases originating in salt-water ports show 86 percent of the cutaneous acanthomas on the exposed areas, as compared with 63 percent in cases originating in fresh-water ports and inland points. Latitude per se seems of little importance. When the white males only are considered and further separated into seamen and landsmen, the groups of seamen from Great Lakes and inland ports and of landsmen from salt-water ports are probably too small to give significant figures; we are thus not able to decide whether the occupational or the geographic factor is the more important. The fact that outdoor landsmen and deck seamen show no greater concentration of acanthomas on exposed areas inclines us to the view that the geographic factor is the more important.

Multiple basal cell tumors were present in 4 cases; 1 seaman had at different times basal cell tumors of the face and leg, an acanthoma of the hand, and an adenoid cystic epithelioma of the back; 3 seamen had 2 basal cell tumors at the same time, face and neck, cheek and ear, right and left cheeks. Another seaman had a basal cell tumor of the cheek and an acanthoma adenoides cysticum of the buttock, another a similar adenoid cystic tumor of the face in 1929 and a basal cell tumor of the nose in 1931. The 149 basal cell tumors in the 145 patients were distributed as follows: scalp, forehead, and eyebrow, 15; eyelids, 15; temple and ear, 22; cheeks, 23; nose, 18; face, 17; neck, 16; trunk, 7; perineum, 2; arm and hand, 4; leg and foot, 3, and unknown, 7. Again the white seamen present a higher proportional incidence of tumors on the exposed areas of the body (93 percent compared with 82 percent in white landsmen). Segregation as with the acanthomas according to the geographic location of the hospital submitting the material gave no significant difference between salt-water ports on the one hand, and lake and inland points on the other. Points north of 37° N. gave a higher proportionate incidence of basal cell tumors on the exposed areas in both white seamen (98 percent) and landsmen (86 percent) than did points south of 37° N. (87 and 76 percent). When white males were divided into 4 groups—outdoor and indoor landsmen, deck department, and combined stewards, and engine force for seamen—indoor landsmen showed 78 percent of the tumors on exposed areas as compared with about 90 percent in the other 3 groups. However, the groups are small and no definite conclusions can be drawn.

Adenoid and adenoid cystic epitheliomas of the skin were located on the eyebrow and lid, forehead, and scalp in 9 cases, nose in 4, cheek and face in 12, temple and ear in 4, head in 1, neck in 4, hand in 2, trunk in 3, and the location was unknown in 1 case.

Basal cell and adenoid tumors were specifically diagnosed as cylindroma in 142 cases, adenoid cystic epithelioma of Brooke in 27, between cylindroma and the Brooke type in 4, acanthoma adenoides

cysticum of Unna in 6, between cylindroma and the Unna type in 1, epithelioma adenoides in 5, between cylindroma and epithelioma adenoides in 1, acanthoma adenoides (of Unna type, but noncystic) in 1, and between cylindroma and acanthoma in 2 cases.

Adnexal cutaneous tumors included 4 adenomata sebacea of the nose, lip, and face (*2*), 2 sweat gland carcinomas of the nose and scrotum, 1 sweat gland adenocarcinoma of unknown location, 2 sweat gland adenoacanthomas of temple and scalp, a papillary cystadenoma sudoriporum of the chest, a teratoid papillary adenoepitheliomyxofibroma of the scalp, and an aberrant paraganglion of the temple.

Six primary cutaneous naevomelanomas were located on the head and neck, 10 on the trunk, 6 on the upper extremity, 9 on the lower extremity, and the location of 7 was unknown.

Cutaneous xanthomas and giant cell tumors were found in 3 cases on the eyelids, in 3 on the elbows, forearms, and hands, in 15 on buttocks, thighs, legs, and feet, in 1 on the abdomen, and in 1 case the location was unknown. In 5 cases the tumors were multiple.

Angioendothelioma and angiosarcoma cutis were located on the face in 1 case, scalp in 3, shoulder in 3, upper extremity in 4, lower extremity in 4 and in 1 case the location was unknown. Diagnoses were hemorrhagic sarcoma in 4 cases, angioendothelioma in 9, fibroangioendothelioma in 1, and multiple angiofibrochondroma in 1.

Sarcoma and fibrosarcoma cutis comprised 31 tumors in 30 cases, located on the face in 1, ear in 1, neck in 3, trunk in 6, upper extremity in 5, lower extremity in 13, and in 2 the location was unknown; 16 were fibrosarcomas, 13 fibroblastic.

Solitary neurofibromas and neurofibrosarcomas cutis were located on the head in 6 cases, trunk in 11, upper extremity in 12, lower in 8, and in unknown location in 7. The diagnosis was neurofibrosarcoma in 17 cases, neurofibroma in 27.

For comparison with the locations of the cutaneous tumors just mentioned, table 12 is presented to give the locations of the benign cutaneous tumors studied during the same period.

In bone sarcoma, the primary tumors involved the jaws in 6 cases, vertebrae in 2, ribs in 3, scapula and ulna in 1 each, pelvis in 5, femur and knee joint in 5, tibia in 5, toes in 2, and in 1 there was an osteochondrofibrosarcoma metastatic in the lungs with no record of the primary site. Five cases were periosteal fibroblastic and fibrosarcomas, 7 were osteoplastic fibroblastic sarcomas of which 3 were noted as subperiosteal, 5 were osteochondrosarcomas, 5 were chondrosarcomas, 4 myxochondromas, and 3 myxosarcomas. Two medullary tumors were, respectively, chondrosarcoma of a distal phalanx of a toe and osteosarcoma originating in a cyst in the femur and metastasizing to liver and lungs; the latter was an autopsy case with multiple bone cysts in humerus and skull as well.

TABLE 12.—*Distribution of 486 benign cutaneous tumors*

	Benign naevi					Verrucae					Fibromas						Angiomas				Keloids			
	White seamen	White landsmen	White females	Other	All	White seamen	White landsmen	White females	Other	All	White seamen	White landsmen	White females	Negro males	Other	All	White seamen	White landsmen	Other	All	White males	Negro males	All males	Total
Head	16	13	5	6	40	20	15	9	6	50	1	2	1	0	2	6	2	3	2	7	1	1	2	105
Neck	1	1	1	0	3	3	6	0	1	10	6	0	0	0	1	7	0	2	1	3	1	2	4	27
Trunk	8	5	10	3	26	19	16	2	2	39	9	4	2	4	3	22	4	8	2	14	2	1	3	104
Upper	1	3	2	0	6	21	10	4	4	39	8	3	2	0	1	14	5	2	3	10	1	1	2	71
Lower	3	2	1	3	9	6	11	2	4	23	7	3	2	3	3	18	4	7	1	12	0	0	0	62
Unknown	16	16	10	7	49	5	10	5	12	32	7	4	2	3	5	21	5	5	4	14	0	1	1	117
Total	45	40	29	19	133	74	68	22	29	193	38	16	9	10	15	88	20	27	13	60	5	6	12	486
Multiple	---	---	---	---	---	4	1	---	---	5	---	---	---	---	---	---	---	3	1	4	---	---	---	9

Muscle and fascial sarcoma included 13 cases with fibroblastic spindle cell structure, 2 mixed fibroblastic and fibrosarcomas, 6 fibrosarcomas, 3 myxomas, 1 myxofibroma, 5 myxofibroblastic and myxosarcomas, 1 myxofibrosarcoma, and 2 myxolipofibroblastic sarcomas. Primary tumors involved the orbit in 1 case, lower extremity in 17, trunk in 8, upper extremity in 2, neck in 1, spermatic cord in 1, and in 3 the location was uncertain.

Sarcomas of deep nerve trunks arose on cranial nerves or in the head in 5 cases, phrenic nerve or neck in 4, upper extremity or specified nerves therein in 10, lower in 9, trunk in 2, and were identified only in visceral or bony metastases in 2 cases. Histologically, 18 cases were classed as neurofibrosarcoma, 4 as neurilemmoma, 1 as endothelioma, 9 as neurofibroma. There were 2 cases of deep angioendothelioma, 1 involving the radial nerve and fatal 1 year later, the other causing rupture of the extensor tendon of the thumb.

Tumors diagnosed as mesothelioma arose in the pleura in 3 cases, peritoneum in 2, and pericardium in 1. Four were composed largely of spindle cells, 1 was quite desmoplastic, and 1 showed tubular structure.

Giant cell tumors of tendons and aponeuroses were found in fingers in 19 cases, palm and wrist in 7, knee in 4, foot in 2, occiput in 1, and in an amputation stump bursa in 1. Structure was chiefly xanthomatous in 12 cases, partly in 7, and not xanthomatous in 15.

Giant cell tumors of bone arose in the femur in 2 cases, tibia in 3, and radius in 1.

Benign bony and cartilaginous tumors comprised 10 chondromas, 30 osteomas and osteochondromas, and 1 cementoma; 6 were located in skull and jaws, 7 in upper extremity, 5 in ribs and pelvis, 8 in the femur, 9 in the tibia and fibula, 2 in the foot, and in 5 cases location was unknown.

Two muscular and fascial fibromas occurred in the neck, 5 in back

and buttocks, 6 in the upper extremity, 3 in the lower extremity, and 2 in the omentum.

Among fascial tumors were 4 cases with leiomyoma arising apparently from the muscle layers of an increased number of small arteries; 3 of these tumors were found in the thigh, 1 in the upper lip. Perhaps these tumors should be designated as arterial angiomyoma of the deep fascia.

Lipomas from 303 cases were examined. Multiple tumors were present in 36 cases. Locations were known in 275: head 30, neck 33, trunk 122, upper extremity 56, lower 28, miscellaneous 6. In white seamen, 30.7 percent of the lipomas were on the head, neck, and hands; in white landsmen only 14.0 percent. Geographic location of the hospitals from which these tumors were received had no influence on their topographic distribution. (Compare with the cutaneous acanthomas.)

Table 13 gives the detailed classification of the 145 cases with lymphatic tumors.

TABLE 13.—*Diagnoses of lymphatic tumors, average ages, sex, race, and occupation of patients, and known deaths*

Diagnosis	White seamen			White landsmen			Others			Total			
	Number	Average age	Number dead	Number	Average age	Number dead	Number	Average age	Number dead	Number	Average age	Number dead	Percent dead
Fibrosing Hodgkin's	8 (4)	------	6 (3)	5 (2)	------	3 (2)	1	------	0	14	34.7	9 (5)	64
Cellular Hodgkin's	22 (7)	------	14 (6)	15 (3)	------	8 (3)	3	------	1	40	37.8	23 (9)	57
Hodgkin's and reticulum cell sarcomas	7 (3)	------	5 (3)	9 (1)	------	9 (1)	1	------	1	17	43.2	15 (4)	88
Monocytic leukemia	0	------	0	1	------	1	0	------	0	1	45	1	0
Total	30	38.9	19	27	39.8	18	4	33.7	2	61	38.8	39	64
Lymphoma	3	------	0	0	------	0	----	------	0	3	25.0	0	0
Follicular lymphocytoma	2	------	1	0	------	0	----	------	0	2	33.5	1	50
Follicular lymphosarcoma	5	------	0	2	------	1	1	51	1	8	47.9	2	25
Aleukemic lymphocytoma	3	------	1	5	------	4	4	------	3	12	49.3	8	67
Leukemic lymphocytoma	4	------	3	2	------	2	2	------	2	8	46.0	7	87
Lymphosarcomas	13	------	8	9	------	4	4	------	1	26	41.7	13	50
Leukemic lymphosarcoma	2	------	1	1	------	0	1	------	1	4	46.7	2	50
Total	32	41.1	14	19	47.2	11	12	44.4	8	63	43.5	33	52
Plasma cell myeloma	2	------	2	3	------	2	1	22	1	6	52.5	5	83
Myeloblastic myeloma	4	------	4	3	------	3	----	------	----	7	39.3	7	100
Myelocytic pseudoleukemia	1	------	1	1	------	1	----	------	----	2	26.5	2	100
Myelocytic leukemia	4	------	4	2	------	2	----	------	----	6	44.3	6	100
Total	11	44.7	11	9	44.3	8	1	22	1	21	43.5	20	95
Grand total	73	41.7	44	55	43.2	37	17	39.7	11	145	41.5	92	63

NOTE.—The figures in parentheses indicate the number of cases under each category that are also included in other categories.

This group is conspicuous for the diagnostic difficulties involved, and on many of the earlier cases in this group, restudy was deemed necessary on account of changes in concepts and classification of

these conditions. Following this study not only were some cases reclassified but some were rejected entirely as follows:

No. 5950, diagnosed lymphoma, rejected as hypertrophic lymphadenitis. No. 4165 diagnosed lymphosarcoma, rejected as subacute hyperplastic lymphadenitis. No. 5444 diagnosed lymphosarcoma, rejected as lymphogranuloma inguinale. No. 5640 diagnosed Hodgkin's, rejected as subacute pyogenic lymphadenitis. No. 5479 diagnosed Hodgkin's (inguinal), rejected as lymphogranuloma inguinale. No. 26024 diagnosed as Hodgkin's and tuberculosis, rejected as lymphogranuloma inguinale. No. 301291 diagnosed as probable early Hodgkin's, rejected as subacute lymphadenitis. No. S–2377, diagnosed as lymphadenitis with eosinophilia, possibility of Hodgkin's left open, finally rejected with diagnosis of pernicious anemia. Nos. S–2980 and A–773, diagnosis in dispute between lymphosarcoma of follicular lymphoblastic or reticulum cell type and hyperplastic lymphadenitis, considered finally subacute mesenteric thrombosis with abdominal lymphadenitis. No. A–901, diagnosed as granulomatous mediastinal Hodgkin's and fibrosing tuberculosis, rejected as fibrosing tuberculosis.

Nos. 26020 and 27388, first reported as reticulum cell lymphosarcoma, finally excluded as metastatic (cervical) transitional cell carcinoma. No. 27236, endothelioma of lymph node, reclassified as metastatic carcinoma (cervical). Nos. 27371 and 27384, first regarded as reticulum cell sarcoma of tonsil with subcutaneous metastasis, excluded as transitional cell carcinoma. Nos. S–1222 and A–605, diagnosed reticulum cell sarcoma over an original impression of metastatic carcinoma, now regarded as metastatic unpigmented naevocarcinoma. No. 29502, hyperplastic lymphadenitis with question of lymphosarcoma, disposed of as syphilis. No. A–788, diagnosis much disputed, classed as mediastinal Hodgkin's sarcoma, rejected as thymic carcinoma. No. S–1801, diagnosed as cutaneous metastatic reticulum cell sarcoma or carcinoma, finally resolved as embryonal carcinoma of testis. No. S–7675, diagnosis lymphoblastic lymphosarcoma or bronchogenic carcinoma, decided as the latter.

In ocular melanosarcoma, iris was the source in 1 case, chorioid in 11. Right and left eyes were involved with equal frequency.

Meningioma was called variously meningioma, angiosarcoma, and angioendothelioma. Locations were left frontal, parietal and temporal, cerebellar, and 2 spinal.

Of the cerebral gliomas, 10 tumors originated in cerebral cortex; 2 frontal, 5 postcentral and parietal, 2 temporal and 1 not designated; 1 originated in the corpus callosum; 1 bilateral tumor in the corona radiata of the parieto-occipital areas extending from the tail of the caudate nucleus to the calcarine cortex; 2 originated in internal capsule; 3 in the cerebellum and 1 in the pons; 9 cases were diagnosed

as spongioblastoma multiforme, 1 spongioblastoma unipolare, 2 spongioblastoma bipolare, 2 astrocytoma, 1 astrocytoma fibrillare, 1 neurocytoma, 1 pinealoma, and 1 as glioma.

In addition to the foregoing, there was found a papilloma of the chorioid plexus in the posterior horn of the left lateral ventricle of a 7-month-old white female infant who died of pertussis pneumonia.

CARCINOMA OF UNCERTAIN SOURCE

After every effort to assign a proper site of origin to tumors, there remained a residue of 62 cases, 26 in white seamen, 25 in landsmen, 3 in white females, 6 in Negro males, 1 each in Negro and Indian females, and 1 in a male of unknown race. The sites of these tumors, mode of diagnosis, and type of tumor are shown in table 14.

It is noteworthy that in most of the cases in which complete autopsy was performed, the case was general carcinosis in which no decision could be reached as to the primary source of the tumor. In 3 of the bone tumors, clinical diagnoses of sarcoma were made and either no autopsies were done or they were incomplete; 1 case of adenocarcinoma of femur and acetabulum was subjected to complete autopsy and no primary source could be demonstrated. However, no histologic material was obtained from thyroid or testis. In the 2 fairly complete autopsies in which carcinoma of the liver was found, the gross diagnoses were primary carcinoma, but the tumors histologically appeared to be metastatic tumors.

TABLE 14.—*Tumors of undetermined origin*

Site of tumor	Diagnosed at			Type of tumor					Total
	Biopsy	Partial autopsy	Complete autopsy	Carcinoma	Adenocarcinoma	Mucous carcinoma	Scirrhous carcinoma	Acanthoma	
Liver	9	2	2	11	2				13
Omentum, peritoneum	6				3	3			6
Cervical lymph node	10			4	3	0	2	1	10
Axillary lymph node	3			3					3
Inguinal lymph node	3			1	1		1		3
Chest and abdominal wall	2				1	1			2
Subcutis	4			2	1		1		4
Bones	7	4	1	8	2	2	0	0	12
General carcinosis	1		7	4	3	0	1	0	8
Other and not known		1	1		1			1	2
Total	45	7	11	33	17	6	5	2	63

SUMMARY

There is reported an analysis of 2,066 malignant and 1,222 benign tumors studied histologically by the writer. Differences in type and location of various tumors according to sex, race, age, and occupation are pointed out. The series includes a high proportion of white male seafaring patients, and this group is specially considered. A small

series of tumors from American Indians is also included and discussed. Differences in behavior of histologic varieties of many tumors of specified locations are discussed briefly.

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DEATHS DURING WEEK ENDED NOVEMBER 15, 1941

[From the Weekly Mortality Index, Issued by the Bureau of the Census, Department of Commerce]

	Week ended Nov. 15, 1941	Corresponding week, 1940
Data from 88 large cities of the United States:		
Total deaths	8,276	8,093
Average for 3 prior years	8,210	
Total deaths, first 46 weeks of year	384,048	384,988
Deaths per 1,000 population, first 46 weeks of year, annual rate	11.7	11.7
Deaths under 1 year of age	553	506
Average for 3 prior years	499	
Deaths under 1 year of age, first 46 weeks of year	24,360	23,091
Data from industrial insurance companies:		
Policies in force	64,642,665	64,855,143
Number of death claims	9,699	10,110
Death claims per 1,000 policies in force, annual rate	7.8	8.2
Death claims per 1,000 policies, first 46 weeks of year, annual rate	9.4	9.6

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

REPORTS FROM STATES FOR WEEK ENDED NOVEMBER 22, 1941

Summary

A total of 158 cases of poliomyelitis was reported for the current week, as compared with 174 for the preceding week and with a 5-year (1936–40) median of 114 for the corresponding week. The following named 3 States reported 15 or more cases (last week's figures in parentheses): Tennessee 28 (29); Pennsylvania 16 (8); and New York 15 (28). The persistence of the disease in these States has been largely responsible for the continued incidence above the normal seasonal expectancy. Only 5 other States reported more than 4 cases (Alabama 9, Ohio, Michigan, and Minnesota 8 each, and Illinois 5).

The number of reported cases of influenza was slightly above that for last week—2,469 as compared with 2,372. The 5-year median expectancy for the week is 1,161. More than one-half of the current cases were reported from Texas—1,295 as compared with 1,085 for the preceding week. South Carolina reported 291 cases, Virginia 157, Arkansas 128, Oklahoma 113, and Arizona 105. The highest incidence is shown for the southern and western States. Only 93 cases were reported in the New England, Atlantic, and North Central States.

No unusual incidence of any of the other common communicable diseases was reported. A delayed report of 1 case of psittacosis occurring in New York during October was received. Of 50 cases of endemic typhus fever, 25 occurred in Georgia.

The crude death rate for the current week in 88 large cities of the United States is 11.7 per 1,000 population, as compared with 11.6 last week and with 11.2 for the 3-year (1938–40) average.

Telegraphic morbidity reports from State health officers for the week ended November 22, 1941, and comparison with corresponding week of 1940 and 5-year median

In these tables a zero indicates a definite report, while leaders imply that, although none were reported, cases may have occurred.

Division and State	Diphtheria			Influenza			Measles			Meningitis, meningococcus		
	Week ended—		Median 1936–40	Week ended—		Median 1936–40	Week ended—		Median 1936–40	Week ended—		Median 1936–40
	Nov. 22, 1941	Nov. 23, 1940		Nov. 22, 1941	Nov. 23, 1940		Nov. 22, 1941	Nov. 23, 1940		Nov. 22, 1941	Nov. 23, 1940	
NEW ENG.												
Maine	0	1	3	------	------	1	142	64	37	0	1	0
New Hampshire	1	0	0	2	------	------	17	3	3	0	0	0
Vermont	0	0	1	------	------	------	1	12	12	0	0	0
Massachusetts	5	1	4	------	------	------	108	264	143	3	1	1
Rhode Island	4	1	1	------	------	------	3	0	4	0	0	0
Connecticut	0	0	2	------	4	4	65	4	30	1	2	0
MID. ATL.												
New York	14	13	20	[1] 7	[1] 1	[1] 13	136	493	129	7	0	5
New Jersey	2	10	10	4	3	7	15	183	28	1	2	1
Pennsylvania	12	16	38	------	------	------	332	972	62	3	2	2
E. NO. CEN.												
Ohio	22	10	36	9	25	9	28	35	18	1	0	1
Indiana	13	17	25	32	7	8	17	21	11	0	1	1
Illinois	30	19	39	6	3	12	30	356	18	4	0	1
Michigan [3]	7	12	16	1	------	1	50	348	93	0	2	2
Wisconsin	5	1	3	17	21	23	157	262	40	0	0	0
W. NO. CEN.												
Minnesota	0	1	6	1	------	------	10	59	59	0	0	0
Iowa	7	4	4	1	4	3	18	33	13	0	0	1
Missouri	10	4	22	12	3	14	13	5	5	0	2	2
North Dakota	0	5	1	------	9	8	18	0	4	0	0	0
South Dakota	1	0	1	------	------	------	1	0	2	0	0	0
Nebraska	7	0	2	------	------	------	5	2	2	0	0	0
Kansas	6	5	10	1	1	2	66	15	15	0	1	1
SO. ATL.												
Delaware	1	4	0	------	------	------	1	3	3	0	0	0
Maryland [3]	29	3	10	4	5	5	52	4	6	0	1	1
Dist. of Col.	0	1	6	------	1	------	2	3	3	0	0	0
Virginia	51	24	57	157	123	105	102	48	23	0	2	2
West Virginia	10	8	13	13	16	16	76	14	14	0	0	2
North Carolina [3]	60	27	69	5	5	5	165	8	132	1	1	1
South Carolina [3]	23	10	12	291	157	274	8	2	6	0	0	0
Georgia [3]	21	18	21	59	16	15	21	5	3	1	0	1
Florida [3]	8	9	9	------	2	7	9	2	3	0	0	0
E. SO. CEN.												
Kentucky	17	10	16	3	10	10	36	144	11	0	1	1
Tennessee [3]	31	16	21	31	14	40	37	13	13	1	1	2
Alabama [3]	39	12	34	66	52	52	9	11	10	0	0	2
Mississippi [3] [4]	15	4	20	------	------	------	------	------	------	1	0	1
W. SO. CEN.												
Arkansas	29	23	17	128	62	46	66	3	3	1	0	0
Louisiana [3]	7	8	20	11	6	6	2	0	1	0	1	1
Oklahoma	18	7	13	113	38	47	24	2	2	0	0	0
Texas [3]	76	17	49	1,295	104	209	112	2	9	2	1	1
MOUNTAIN												
Montana	4	3	2	7	5	5	26	4	14	0	0	0
Idaho	6	0	0	8	------	------	6	0	26	0	0	1
Wyoming	0	0	0	2	1	------	0	0	1	0	0	0
Colorado	13	6	6	17	11	9	108	26	21	0	1	1
New Mexico	4	0	4	------	4	1	19	14	14	0	0	0
Arizona	4	3	5	105	117	87	29	30	13	0	0	0
Utah [2]	2	0	1	7	12	7	25	2	15	1	0	0
Nevada	1	0	------	------	------	------	3	0	------	0	0	------
PACIFIC												
Washington	1	3	3	------	1	------	10	11	11	0	0	0
Oregon	1	2	1	9	18	21	25	23	9	0	0	0
California [3]	25	17	28	45	471	33	259	63	63	1	1	1
Total	642	355	789	2,469	1,332	1,161	2,464	3,568	2,221	29	24	37
47 weeks	14,547	13,930	24,507	584,478	179,196	162,712	847,884	248,828	277,005	1,827	1,521	2,626

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended November 22, 1941, and comparison with corresponding week of 1940 and 5-year median—Continued

Division and State	Poliomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever		
	Week ended—		Median 1936–40	Week ended—		Median 1936–40	Week ended—		Median 1936–40	Week ended—		Median 1936–40
	Nov. 22, 1941	Nov. 23, 1940		Nov. 22, 1941	Nov. 23, 1940		Nov. 22, 1941	Nov. 23, 1940		Nov. 22, 1941	Nov. 23, 1940	
NEW ENG.												
Maine	2	0	0	17	9	13	0	0	0	0	0	1
New Hampshire	2	0	0	14	0	4	0	0	0	0	0	0
Vermont	0	0	0	7	11	9	0	0	0	0	0	0
Massachusetts	4	0	0	170	119	105	0	0	0	2	3	1
Rhode Island	0	0	0	14	3	7	0	0	0	0	0	0
Connecticut	2	1	1	20	29	39	0	0	0	2	5	2
MID. ATL.												
New York	15	3	4	216	141	246	0	0	0	6	6	7
New Jersey	3	1	1	86	72	72	0	0	0	1	5	2
Pennsylvania	16	4	4	210	187	218	0	0	0	7	9	14
E. NO. CEN.												
Ohio	8	16	2	137	130	242	1	0	0	9	2	2
Indiana	4	10	0	105	72	124	1	0	3	2	0	3
Illinois	5	26	3	160	242	306	2	4	1	3	3	6
Michigan [2]	8	13	2	115	112	274	1	9	3	1	2	3
Wisconsin	3	18	1	111	108	165	0	2	7	1	0	1
W. NO. CEN.												
Minnesota	8	11	2	50	70	102	1	6	11	0	0	0
Iowa	0	6	3	33	99	92	1	0	2	2	1	1
Missouri	3	5	4	80	49	81	1	0	4	4	2	6
North Dakota	0	1	1	3	11	23	0	0	16	0	0	0
South Dakota	1	0	0	33	24	26	0	0	1	0	0	0
Nebraska	0	6	2	16	7	20	0	1	0	1	0	0
Kansas	2	2	1	70	89	119	1	0	1	1	3	3
SO. ATL.												
Delaware	0	0	0	15	7	7	0	0	0	2	0	0
Maryland [2]	4	1	0	43	36	36	0	0	0	2	2	3
Dist. of Col	1	0	0	14	8	11	0	0	0	0	0	0
Virginia	2	9	0	68	55	55	0	0	0	6	6	6
West Virginia	6	18	1	68	44	88	1	0	0	5	1	5
North Carolina [3]	3	2	1	89	78	78	0	0	0	1	8	8
South Carolina [3]	0	0	0	10	10	11	1	0	0	1	0	0
Georgia [3]	1	0	0	49	35	34	1	0	0	5	5	0
Florida [3]	2	0	0	7	3	6	0	0	0	1	4	0
E. SO. CEN.												
Kentucky	3	4	2	85	79	79	0	0	0	6	4	4
Tennessee [3]	28	3	2	125	98	70	0	1	0	11	3	4
Alabama [3]	9	1	2	51	35	34	0	0	0	0	2	3
Mississippi [2 3]	4	0	1	21	18	17	0	0	0	4	2	2
W. SO. CEN.												
Arkansas	1	0	2	11	18	18	0	1	1	13	10	7
Louisiana [3]	0	0	0	7	8	12	0	0	0	3	5	5
Oklahoma	1	1	1	23	12	27	0	0	4	4	5	8
Texas [3]	1	1	1	93	16	68	0	0	2	6	0	20
MOUNTAIN												
Montana	1	1	0	28	24	31	1	1	1	0	0	0
Idaho	2	1	0	1	11	15	0	0	1	0	4	3
Wyoming	0	2	0	5	5	5	0	0	0	0	0	0
Colorado	1	2	2	25	31	31	0	0	3	4	2	2
New Mexico	0	0	0	7	6	18	0	0	0	7	5	4
Arizona	1	0	0	2	8	8	0	0	0	1	1	1
Utah [2]	0	1	1	8	12	17	0	1	0	0	3	1
Nevada	0	0	------	1	0	------	0	0	------	0	0	------
PACIFIC												
Washington	1	1	1	21	13	32	0	0	3	1	3	2
Oregon	3	3	0	4	25	27	0	0	3	0	2	2
California [3]	3	5	11	94	78	169	1	0	2	1	9	7
Total	158	179	114	2,642	2,357	3,363	14	26	109	126	127	194
47 weeks	8,693	9,379	6,911	112,628	140,753	167,502	1,278	2,202	9,122	7,954	9,038	13,597

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended November 22, 1941, and comparison with corresponding week of 1940—Continued.

Division and State	Whooping cough	
	Week ended—	
	Nov. 22, 1941	Nov. 23, 1940
NEW ENG.		
Maine	23	29
New Hampshire	0	10
Vermont	12	10
Massachusetts	134	266
Rhode Island	35	5
Connecticut	73	115
MID. ATL.		
New York	474	465
New Jersey	226	147
Pennsylvania	223	649
E. NO. CEN.		
Ohio	235	289
Indiana	41	26
Illinois	237	130
Michigan [2]	279	322
Wisconsin	338	134
W. NO. CEN.		
Minnesota	56	119
Iowa	26	20
Missouri	21	99
North Dakota	9	9
South Dakota	3	4
Nebraska	9	8
Kansas	87	116
SO. ATL.		
Delaware	2	38
Maryland [2]	27	89
District of Columbia	14	9
Virginia	51	86
West Virginia	9	29
North Carolina [3]	102	176
South Carolina [3]	22	33
SO. ATL.—continued		
Georgia [3]	15	18
Florida [3]	9	6
E. SO. CEN.		
Kentucky	124	67
Tennessee [3]	26	51
Alabama [3]	30	13
Mississippi [2 3]	----	----
W. SO. CEN.		
Arkansas	15	7
Louisiana [3]	3	4
Oklahoma	18	15
Texas [3]	102	37
MOUNTAIN		
Montana	27	5
Idaho	2	6
Wyoming	9	1
Colorado	42	17
New Mexico	25	20
Arizona	10	2
Utah [2]	20	24
Nevada	9	0
PACIFIC		
Washington	116	41
Oregon	33	10
California [3]	152	323
Total	3,555	4,099
47 weeks	191,173	150,970

[1] New York City only.
[2] Period ended earlier than Saturday.
[3] Typhus fever, week ended Nov. 22, 1941, 50 cases as follows: North Carolina, 3; South Carolina, 3; Georgia, 25; Florida, 2; Tennessee, 2; Alabama, 5; Mississippi, 2; Louisiana, 1; Texas, 6; California, 1.

WEEKLY REPORTS FROM CITIES

City reports for week ended November 8, 1941

This table lists the reports from 131 cities of more than 10,000 population distributed throughout the United States, and represents a cross section of the current urban incidence of the diseases included in the table.

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Maine:											
Portland	0	----	0	1	2	4	0	1	0	5	24
New Hampshire:											
Concord	0	----	0	0	1	0	0	0	0	0	11
Nashua	0	----	0	0	0	5	0	0	0	11	8
Vermont:											
Barre	0	----	----	0	----	0	0	----	0	0	----
Burlington	0	----	0	0	0	2	0	0	0	0	9
Rutland	0	----	0	0	0	0	0	1	0	0	4
Massachusetts:											
Boston	0	----	0	5	8	42	0	10	1	37	205
Fall River	1	----	0	0	1	16	0	1	0	2	33
Springfield	0	----	0	9	1	11	0	0	0	15	23
Worcester	0	----	0	1	10	0	0	0	0	4	52
Rhode Island:											
Pawtucket	0	----	----	1	----	0	0	----	0	0	----
Providence	3	----	0	5	3	5	0	2	0	18	52
Connecticut:											
Bridgeport	0	1	0	2	3	1	0	2	0	0	28
Hartford	0	----	0	1	6	5	0	0	0	3	43
New Haven	0	----	0	27	0	1	0	0	0	3	23
New York:											
Buffalo	0	----	1	0	7	10	0	7	0	21	140
New York	23	2	2	8	55	68	0	67	2	230	1,439
Rochester	0	----	0	0	3	2	0	2	0	6	69
Syracuse	0	----	0	0	2	1	0	0	0	20	38
New Jersey:											
Camden	0	----	0	0	1	5	0	0	0	3	34
Newark	0	6	1	4	6	13	0	5	0	51	84
Trenton	0	----	0	0	2	5	0	1	0	1	35
Pennsylvania:											
Philadelphia	0	----	1	3	19	37	0	12	1	72	439
Pittsburgh	1	1	1	1	10	22	0	6	1	31	156
Reading	0	----	0	1	0	0	0	0	0	6	24
Scranton	0	----	----	0	----	0	0	----	0	0	----
Ohio:											
Cincinnati	0	2	1	0	6	10	0	2	1	11	98
Cleveland	1	11	0	1	9	11	0	10	2	37	194
Columbus	0	----	0	1	4	7	0	1	0	8	82
Toledo	1	----	0	2	1	2	0	5	1	9	78
Indiana:											
Anderson	0	----	0	0	2	0	0	0	0	0	7
Indianapolis	3	----	1	2	9	15	0	1	1	21	120
Muncie	0	----	0	0	2	0	0	1	0	0	15
South Bend	0	----	0	0	0	0	0	0	0	0	16
Terre Haute	1	----	0	0	2	0	0	0	0	0	17
Illinois:											
Alton	1	----	0	0	3	0	0	0	0	0	9
Chicago	13	9	2	26	25	63	0	33	0	104	662
Elgin	0	----	0	0	1	0	0	0	0	5	11
Springfield	0	----	0	1	3	1	1	0	0	0	29
Michigan:											
Detroit	2	----	0	10	11	62	0	10	0	48	284
Flint	1	----	0	0	2	1	0	0	0	1	35
Grand Rapids	0	----	0	2	2	0	0	0	0	6	40
Wisconsin:											
Kenosha	0	----	0	0	0	0	0	0	0	3	13
Madison	0	----	0	2	0	2	0	0	0	5	14
Milwaukee	0	----	0	2	5	25	0	3	0	112	94
Racine	0	----	0	2	0	2	0	0	0	16	18
Superior	0	----	0	2	0	0	0	0	0	10	6
Minnesota:											
Duluth	0	----	0	0	0	5	0	0	0	11	20
Minneapolis	1	----	0	1	2	3	0	0	0	13	93
St. Paul	0	----	0	0	4	8	0	1	0	22	47
Iowa:											
Cedar Rapids	0	----	----	0	----	1	0	----	0	0	----
Davenport	1	----	----	0	----	1	0	----	0	0	----
Des Moines	0	----	0	0	0	5	0	0	0	0	40
Sioux City	0	----	----	0	----	0	0	----	0	0	----
Waterloo	0	----	----	0	----	4	0	----	0	0	----

City reports for week ended November 8, 1941—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis cases	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Missouri:											
Kansas City	0	------	1	1	7	14	0	4	0	2	79
St. Joseph	0	------	0	3	3	2	0	0	0	0	23
St. Louis	4	3	2	0	8	17	0	6	0	5	172
North Dakota:											
Fargo	0	------	0	0	0	0	0	0	0	0	7
Grand Forks	0	------	------	0	------	0	0	------	0	0	------
Minot	0	------	0	4	0	0	0	0	0	0	7
South Dakota:											
Aberdeen	0	------	------	1	------	2	0	------	0	13	------
Nebraska:											
Lincoln	0	------	------	1	------	0	0	------	0	0	------
Omaha	0	------	0	0	2	3	0	1	0	0	52
Kansas:											
Lawrence	0	------	0	0	1	0	0	0	0	0	5
Topeka	0	4	0	1	0	2	0	0	0	4	15
Wichita	0	------	0	0	1	2	0	1	0	6	34
Delaware:											
Wilmington	0	------	0	1	2	0	0	0	0	0	43
Maryland:											
Baltimore	4	------	0	24	11	18	0	8	1	34	240
Cumberland	0	------	0	0	0	0	0	0	0	1	12
Frederick	0	------	0	0	0	0	0	0	0	0	3
Dist. of Col.:											
Washington	0	2	1	1	7	13	0	6	0	6	154
Virginia:											
Lynchburg	0	------	0	0	4	0	0	0	1	4	11
Norfolk	1	------	0	0	4	0	0	0	0	0	26
Richmond	3	------	1	1	2	4	0	1	0	0	47
Roanoke	0	------	0	0	2	0	0	0	1	1	25
West Virginia:											
Charleston	2	------	0	0	5	1	0	0	0	3	33
Huntington	0	------	------	0	------	0	0	------	0	0	------
Wheeling	1	------	0	8	1	1	0	0	0	2	18
North Carolina:											
Gastonia	0	------	------	0	------	0	0	------	0	0	------
Wilmington	5	------	0	27	1	0	0	2	0	2	18
Winston-Salem	5	------	0	53	0	0	0	1	0	1	8
South Carolina:											
Charleston	0	4	0	0	1	0	0	1	2	0	23
Florence	0	------	0	0	0	0	0	0	0	0	13
Greenville	0	------	0	0	0	0	0	0	0	2	10
Georgia:											
Atlanta	1	7	1	0	3	13	0	2	2	0	74
Brunswick	0	------	0	0	0	0	0	0	0	0	2
Savannah	0	------	0	2	1	0	0	0	0	0	29
Florida:											
Miami	0	------	0	2	2	0	0	2	1	4	32
St. Petersburg	0	------	0	0	0	0	0	1	0	0	22
Tampa	0	------	0	0	1	0	0	1	0	2	15
Kentucky:											
Ashland	0	------	0	0	0	0	0	1	0	0	5
Covington	0	------	0	0	0	2	0	2	0	2	12
Lexington	0	------	0	0	1	0	0	0	0	1	14
Louisville	0	2	0	0	4	16	0	1	0	10	76
Tennessee:											
Knoxville	0	------	0	0	0	2	0	0	0	0	31
Memphis	1	------	0	0	2	7	0	4	0	7	69
Nashville	1	------	0	0	3	7	0	0	0	7	52
Alabama:											
Birmingham	2	------	1	0	0	5	0	4	0	3	65
Mobile	2	------	2	0	0	0	0	4	0	0	32
Montgomery	1	------	------	0	------	0	0	------	0	1	------
Arkansas:											
Fort Smith	1	------	------	0	------	0	0	------	1	0	------
Little Rock	0	8	0	0	0	1	0	1	0	0	28
Louisiana:											
Lake Charles	0	------	0	0	0	1	0	0	0	0	5
New Orleans	1	9	0	0	11	0	0	8	2	6	128
Shreveport	0	------	0	0	2	2	0	0	1	0	29
Oklahoma:											
Oklahoma City	2	4	0	0	9	3	0	1	0	1	58
Tulsa	3	------	1	22	3	3	0	0	0	0	10
Texas:											
Dallas	3	1	1	4	2	5	0	2	1	2	65
Fort Worth	1	------	0	0	2	1	0	1	0	2	37
Galveston	1	------	0	0	0	1	0	0	0	0	18
Houston	1	------	0	2	4	1	0	2	0	3	84
San Antonio	2	7	0	1	0	5	0	0	0	0	68

City reports for week ended November 8, 1941—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths all causes
		Cases	Deaths								
Montana:											
Billings	0	------	0	0	1	0	0	0	0	0	9
Great Falls	0	------	0	2	1	7	0	0	0	8	9
Helena	0	------	0	1	0	0	0	0	0	2	3
Missoula	0	------	0	0	1	0	0	0	0	0	6
Colorado:											
Colorado Springs	0	------	0	1	1	2	0	1	0	5	9
Denver	9	15	1	6	5	4	0	3	1	26	72
Pueblo	0	------	0	58	3	3	0	0	0	2	8
New Mexico:											
Albuquerque	0	------	0	0	1	0	0	0	0	2	5
Arizona:											
Phoenix	2	25	------	0	------	1	0	------	0	1	------
Utah:											
Salt Lake City	0	------	0	2	2	2	------	0	0	11	29
Washington:											
Seattle	0	------	0	0	0	3	0	3	0	25	102
Spokane	0	------	0	0	2	8	0	0	0	3	34
Tacoma	0	------	0	0	1	3	0	1	0	2	20
Oregon:											
Portland	2	1	1	0	2	3	0	0	0	6	99
Salem	0	------	------	0	------	0	0	------	0	0	------
California:											
Los Angeles	0	21	0	14	10	21	0	20	0	16	342
Sacramento	2	1	0	2	0	1	0	1	0	1	33
San Francisco	0	------	0	6	1	4	0	4	1	2	157

State and city	Meningitis, meningococcus		Poliomyelitis cases	State and city	Meningitis, meningococcus		Poliomyelitis cases
	Cases	Deaths			Cases	Deaths	
Vermont:				Minnesota:			
Burlington	0	0	1	Duluth	0	0	2
Massachusetts:				Minneapolis	0	0	1
Boston	1	0	1	St. Paul	0	0	1
New York:				Maryland:			
Buffalo	0	0	1	Baltimore	2	0	0
New York	2	0	14	District of Columbia:			
Rochester	0	0	5	Washington	0	0	2
Syracuse	0	0	3	Virginia:			
New Jersey:				Lynchburg	0	0	1
Newark	0	0	1	Richmond	1	0	0
Trenton	0	0	1	North Carolina:			
Pennsylvania:				Wilmington	0	0	1
Philadelphia	0	0	3	Kentucky:			
Pittsburgh	1	0	0	Louisville	0	0	1
Ohio:				Tennessee:			
Cincinnati	0	0	1	Memphis	0	0	2
Toledo	0	0	1	Alabama:			
Indiana:				Birmingham	0	0	1
Terre Haute	0	0	1	Texas:			
Illinois:				San Antonio	0	0	1
Chicago	1	0	12	Washington:			
Michigan:				Seattle	0	0	2
Detroit	0	0	2	California:			
Grand Rapids	0	0	1	Los Angeles	0	0	1

Dengue.—Cases: Charleston, S. C., 1.
Encephalitis, epidemic or lethargic.—Cases: Birmingham, 1. Deaths: Nashua, 1; New York, 2.
Pellagra.—Cases: Charleston, S. C., 4; Savannah, 2; Miami, 1; Birmingham, 2.
Typhus fever.—Cases: New York, 3; Norfolk, 2; Charleston, S. C., 1; Atlanta, 1; Savannah, 2; Miami, 1; Birmingham, 1; Montgomery, 1; Galveston, 1.

Rates (annual basis) per 100,000 population for a group of 87 selected cities (population, 1940, 33,380,672)

Period	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases
		Cases	Deaths							
Week ended Nov. 8, 1941	15.46	17.62	3.25	52.86	52.08	99.07	0.15	41.42	3.40	177.74
Average for week, 1936-40	23.90	14.53	4.53	96.22	66.54	118.72	0.62	49.05	5.47	164.33

TERRITORIES AND POSSESSIONS

PANAMA CANAL ZONE

Communicable diseases—July–September 1941.—During the months of July, August, and September 1941, certain communicable diseases were reported in the Panama Canal Zone and terminal cities as follows:

Disease	July		August		September	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Chickenpox	3		1		3	
Diphtheria	17		20	2	11	
Dysentery (amoebic)	12		6		4	1
Dysentery (bacillary)	6	6			4	4
Leprosy	3			1	1	2
Lethargic encephalitis	1	1				
Malaria	322	7	260	4	519	9
Measles	100		143		139	
Meningitis, meningococcus			1	1		
Mumps	4		2		3	
Paratyphoid fever	8		2			
Pneumonia	[1] 19	33	[1] 25	35	[1] 29	36
Poliomyelitis	1					
Smallpox (alastrim)					[2] 1	
Tuberculosis	[1] 10	26	[1] 4	26	[1] 3	31
Typhoid fever	1		3		4	1
Whooping cough	[1] 4		[1] 3	4	[1] 2	1

[1] In the Canal Zone only.
[2] In Panama.

FOREIGN REPORTS

CANADA

Provinces—Communicable diseases—Week ended October 18, 1941.—During the week ended October 18, 1941, cases of certain communicable diseases were reported by the Department of Pensions and National Health of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Cerebrospinal meningitis		2	1	1	2	3	1		2	12
Chickenpox		8		107	211	32	48	5	43	454
Diphtheria		22	1	53	5	3	1			85
Dysentery				3						3
Influenza		40			7	1	10		22	80
Lethargic encephalitis				1			[1] 13			14
Measles				107	61	1	6		5	180
Mumps				212	76	17	23	1	71	400
Pneumonia		4			3		2		5	14
Poliomyelitis		1	12		6	3	2	2	1	27
Scarlet fever		10	9	137	157	18	11	19	5	366
Trachoma									17	17
Tuberculosis	1	12	6	97	55	2	18			191
Typhoid and paratyphoid fever			1	22	4	1	9		2	39
Whooping cough				141	94		8		31	274

[1] Encephalomyelitis.

JAMAICA

Communicable diseases—4 weeks ended October 25, 1941.—During the 4 weeks ended October 25, 1941, cases of certain communicable diseases were reported in Kingston, Jamaica, and in the island outside of Kingston, as follows:

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Chickenpox	2	3	Scarlet fever		2
Diphtheria		3	Tuberculosis	28	55
Dysentery	4	3	Typhoid fever	11	55
Leprosy	1	6			

WORLD DISTRIBUTION OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

From medical officers of the Public Health Service, American consuls, International Office of Public Health, Pan American Sanitary Bureau, health section of the League of Nations, and other sources. The reports contained in the following tables must not be considered as complete or final as regards either the list of countries included or the figures for the particular countries for which reports are given.

CHOLERA

[C indicates cases]

NOTE.—Since many of the figures in the following tables are from weekly reports, the accumulated totals are for approximate dates.

Place		January–August 1941	September 1941	October 1941—week ended— 4	11	18	25
ASIA							
Ceylon	C	1	1				
China:							
Canton	C	437	27				
Hong Kong	C	1,547	88	11			
Macao	C	875	307	83	70	40	36
Shanghai	C	486	245	38	23	13	7
India	C	64,013	7,689				
Bombay	C	15					
Calcutta	C	1,868	40	41			
Rangoon	C	115					
India (French)	C	34					
Japan: Taiwan	C	2					

World Distribution of Cholera, Plague, Smallpox, Typhus Fever, and Yellow Fever—Continued

PLAGUE

[C indicates cases]

Place		January–August 1941	September 1941	October 1941—week ended— 4	11	18	25
AFRICA							
Belgian Congo	C	[1] 28					
British East Africa:							
Kenya	C	288	43				
Uganda	C	70	9				
Egypt: **Port Said**	C	8					
Madagascar	C	202	5				[2] 22
Morocco	C	2,006	89		16	19	7
Casablanca.[3]							
Tunisia: **Tunis**	C	2					
Union of South Africa	C	68					
ASIA							
China: **Foochow**	C	3					
Dutch East Indies:							
Java and Madura	C	416					
West Java	C	397					
India	C	3,363					
Calcutta	C	3					
Rangoon	C	9					
Indochina (French)	C	20	3			2	
Palestine: **Haifa**	C	2	3				
Plague-infected rats		10					
Thailand: Lampang Province	C	1	1				
EUROPE							
Portugal: Azores Islands	C	1					
NORTH AMERICA							
Canada—Alberta—Plague-infected ground squirrel		1					
SOUTH AMERICA							
Argentina:							
Cordoba Province	C	[4] 21					
Santa Fe Province—Plague-infected rats		67					
Brazil: Bahia State [5]	C	4					
Chile: Valparaiso.[6]							
Ecuador	C	33					
Peru:							
Ancash Department	C	1					
Lambayeque Department	C	2	1				
Libertad Department	C	6	1				
Lima Department	C	8	2				
Moquegua Department—Ilo	C	7					
Piura Department	C	2					
OCEANIA							
Hawaii Territory: [7] Plague-infected rats		48	4	1			
New Caledonia	C	9					

[1] Includes 21 cases of pneumonic plague.
[2] For the month of October.
[3] A report dated June 23, 1941, stated that an outbreak of plague had occurred in Casablanca, Morocco, where several deaths had been reported.
[4] Includes 3 cases of pneumonic plague.
[5] A report dated Oct. 15, 1941, stated that several cases of plague had occurred in the interior of the State of Bahia, Brazil.
[6] A report dated October 13 stated that 1 case of plague had occurred in Valparaiso, Chile.
[7] During April and May, 4 lots of plague-infected fleas were reported in Hawaii Territory, and for the week ended Nov. 1, one plague-infected rat was reported in Kapulena area, Hamakua District, Island of Hawaii.

World Distribution of Cholera, Plague, Smallpox, Typhus Fever, and Yellow Fever—Continued

SMALLPOX

[C indicates cases]

Place		January–August 1941	September 1941	October 1941—week ended—			
				4	11	18	25
AFRICA							
Algeria	C	311	83				[1] 71
Angola	C	[2] 29					
Belgian Congo	C	634					
British East Africa	C	30					
Dahomey	C	464	2				
French Guinea	C	45					
Ivory Coast	C	39					
Morocco	C	155					
Nigeria	C	732	13				
Niger Territory	C	264	1				
Portuguese East Africa	C	9					
Rhodesia: Southern	C	86					
Senegal	C	59					
Sierra Leone	C	15					
Sudan (Anglo-Egyptian)	C	7					
Sudan (French)	C	19					
Union of South Africa	C	370					
ASIA							
Ceylon	C	114					
China	C	251	1			3	1
Chosen	C	696					
Dutch East Indies—Bali Island	C	3					
India	C	21, 226	[3] 18				
India (French)	C	9					
India (Portuguese)	C	70					
Indochina (French)	C	938	96				[1] 55
Iran	C	8					
Iraq	C	1, 060	122				
Japan	C	200					
Straits Settlements	C	1					
Syria	C	1					
Thailand	C	234	13				
EUROPE							
France	C	1					
Portugal	C	35	2		1		
Spain	C	239	55	7	14	12	
NORTH AMERICA							
Canada	C	24			1		
Dominican Republic	C	2					
Guatemala	C	5					
Mexico	C	37					
Panama Canal Zone (alastrim)	C		1				
SOUTH AMERICA							
Bolivia	C	[3] 18					
Brazil	C	1					
Colombia	C	581	6				
Paraguay	C	[3] 8					
Peru	C	778					
Uruguay	C	7					
Venezuela (alastrim)	C	181	26			9	

[1] For October.
[2] For June.
[3] For January, February, and March.

World Distribution of Cholera, Plague, Smallpox, Typhus Fever, and Yellow Fever—Continued

TYPHUS FEVER

[C indicates cases]

Place		January–August 1941	September 1941	October 1941—week ended—			
				4	11	18	25
AFRICA							
Algeria	C	9,541	216	.....	.....	.....	[1] 227
British East Africa: Kenya	C	4	1	.....	.....	.....	.....
Egypt	C	4,581	.....	.....	.....	.....	.....
Morocco	C	858	26	.....	4	6	8
Sierra Leone	C	5	.....	.....	.....	.....	.....
Tunisia	C	4,793	165	26	39	46	.....
Union of South Africa	C	274	.....	.....	.....	.....	.....
ASIA							
China	C	212	2	.....	.....	.....	.....
Chosen	C	425	.....	.....	.....	.....	.....
Dutch East Indies: Sumatra	C	136	.....	.....	.....	.....	.....
Iran	C	105	.....	.....	.....	.....	.....
Iraq	C	41	.....	.....	.....	.....	.....
Japan	C	864	.....	.....	.....	.....	.....
Malaya: Unfederated States	C	1	.....	.....	.....	.....	.....
Palestine	C	41	.....	.....	.....	.....	.....
Straits Settlements	C	6	.....	.....	.....	.....	.....
Trans-Jordan	C	6	.....	.....	.....	.....	.....
EUROPE							
Bulgaria	C	222	2	.....	2	.....	1
France (unoccupied zone)	C	[2] 2	.....	.....	.....	.....	.....
Germany	C	1,531	147	11	23	15	.....
Gibraltar	C	2	.....	.....	.....	.....	.....
Greece	C	7	.....	.....	.....	.....	.....
Hungary	C	370	38	15	10	.....	.....
Irish Free State	C	26	.....	.....	.....	.....	.....
Poland	C	705	3	.....	.....	.....	.....
Portugal	C	5	.....	.....	.....	.....	.....
Rumania	C	731	29	15	5	5	6
Spain	C	8,906	172	25	25	21	.....
Switzerland	C	5	.....	.....	.....	.....	.....
Turkey	C	623	.....	.....	.....	.....	.....
Yugoslavia	C	78	.....	.....	.....	.....	.....
NORTH AMERICA							
Guatemala	C	145	12	.....	.....	.....	.....
Mexico	C	113	14	.....	4	2	.....
Panama Canal Zone	C	3	.....	.....	.....	.....	.....
Puerto Rico	C	[3] 3	1	.....	3	.....	1
SOUTH AMERICA							
Bolivia	C	[4] 75	.....	.....	.....	.....	.....
Brazil	C	1	.....	.....	.....	.....	.....
Chile	C	125	5	.....	.....	.....	.....
Colombia	C	[3] 1	.....	.....	.....	.....	.....
Ecuador	C	95	24	.....	.....	.....	.....
Peru	C	1,079	.....	.....	.....	.....	.....
Venezuela	C	38	4	.....	.....	.....	.....
OCEANIA							
Australia	C	12	.....	.....	.....	.....	.....
Hawaii Territory	C	20	14	3	2	2	6

[1] For October.
[2] For June.
[3] For July.
[4] For January, February, and March.

World Distribution of Cholera, Plague, Smallpox, Typhus Fever, and Yellow Fever—Continued

YELLOW FEVER

[C indicates cases; D, deaths]

Place		January–August 1941	September 1941	October 1941—week ended—			
				4	11	18	25
AFRICA							
Belgian Congo:							
Kimvulu	C	1					
Libenge	C	1					
Stanleyville.[1]							
British East Africa: Uganda.[2]							
French Equatorial Africa:							
Gabon	C	2					
Mayumba	C	4					
French Guinea.[3]							
Gold Coast: **Accra**	C	1					
Ivory Coast	C	[4] 5			1		
Nigeria	C	[5] 1					
Spanish Guinea	D	4					
Sudan (French).[6]							
SOUTH AMERICA[7]							
Brazil:							
Amazonas State	D	3					
Bahia State	D	2					
Para State	D	5	1				
Colombia:							
Antioquia Department	D	2					
Boyaca Department	D	8					
Intendencia of Meta	D	5	3				
Santander Department	D	12	2				
Tolima Department	D	1					
Peru: Junin Department	C	5					
Venezuela: Bolivar State	C	[5] 1					

[1] For the week ended Nov. 1, 1 death from suspected yellow fever was reported in Stanleyville, Belgian Congo.
[2] A report dated Sept. 9 stated that 1 case of yellow fever was reported in Uganda, British East Africa.
[3] Yellow fever was reported in French Guinea as follows: Week ended Nov. 1, 1 case; week ended Nov. 8, 1 case; week ended Nov. 15, 1 suspected case.
[4] Includes 2 suspected cases.
[5] Suspected.
[6] Yellow fever was reported in French Sudan as follows: Week ended Nov. 1, 5 cases, including 2 suspected cases; week ended Nov. 8, 1 suspected case.
[7] All yellow fever reported in South America is of the jungle type unless otherwise specified.
[8] For the month of August.